

**Legal Medicine and Toxicology**

Code: 102951  
ECTS Credits: 4.5

Degree	Type	Year	Semester
2502442 Medicine	OB	5	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

Name: Santiago Crespo Alonso  
Email: Santiago.Crespo@uab.cat

### 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

José Castella García  
José Manuel Tortosa López  
Josep Maria Paya Padreny  
Joan Ignasi Galtés Vicente  
Indalecio Morán Chorro  
Lidia García Gibert  
Rosa Maria Alcaraz Peñarrocha

### Prerequisites

It is advisable and convenient that the students must be acquired basic skills in understanding the structure and functions of the body, understanding the manifestation of the disease and its impact on the body, indication of complementary tests and their interpretation, knowledge and respect of rights of the patient in relation to beliefs, origin and culture, as well as their autonomy.

The students will acquire the commitment of preserving the confidentiality and professional secrecy of the data that can be accessed by reason of the learning in the assistance services, as well as maintaining an attitude of professional ethics in all his actions.

### Objectives and Contextualisation

The subject is programmed in the 5th year of Medicine grade, when your already have adequate medical knowledge and are part of the compulsory subjects. The objectives are to acquire minimum competences that allow understanding and knowing the use of medical knowledge in other professional fields such as law and its practical application in the service of the administration of justice. In this way the acquired knowledge allows us to understand the effects of violence on the body, in its various forms, the need to communicate such violence to the courts, the consequences on the injured and the corpse. Also know the contribution of medical sciences to the doctrinal body of law, the rules governing daily medical practice, health organization and the

consequences of the defects of these standards, ie the basic principles of "normopraxis" or its defect the malpractice

This subject is complemented with the subject of Bioethics and communication.

## Competences

- Care for patients, families and the community in an effective and efficient manner, in accordance with professional ethics, with special emphasis on health promotion and disease prevention, as part of multidisciplinary teams.
- Communicate clearly, orally and in writing, with other professionals and the media.
- Demonstrate understanding of the causal agents and the risk factors that determine states of health and the progression of illnesses.
- Demonstrate understanding of the importance of ethical principles in dealings with patients, society and the profession, in particular with regard to professional confidentiality.
- Demonstrate understanding of the principles of normal human behaviour and its alterations in different contexts.
- 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.
- 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.
- Recognise ethical, legal and technical factors in patients' documentation, plagiarism, confidentiality and propriety.
- 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 the role of complexity, uncertainty and probability in decision-making in medical practice.
- Write patient records and other medical documents that can be understood by third parties.

## Learning Outcomes

1. Appreciate the importance of seeking out incriminating evidence without hindering the investigation.
2. Assess medico-legal considerations and conclusions.
3. Assess the difficulties regarding information given to patients and/or family-members in cases of malpractice.
4. Communicate clearly, orally and in writing, with other professionals and the media.
5. Define the elements of forensic traumatology and idiosyncrasies of the different parties involved in the conflict.
6. Describe and interpret instruments of psychiatric evaluation in a medico-legal context.
7. Describe chronathanatology, indicating the negative signs of life or positive signs of death.
8. Describe the legal and ethical rules governing professional medical practice and possible legal implications related to the practice of medicine, showing respect for the principle of patient autonomy, the right to informed consent and professional confidentiality.
9. Describe the procedure for carrying out a judicial autopsy.
10. Enumerate and describe the component parts of an expert report.
11. Explain the law on gender violence.
12. Explain the scale related to traffic accidents.
13. Formulate a medico-legal diagnosis of the different types of injuries and know the legal implications of these.
14. Formulate a medico-legal expert report.
15. Formulate the problems that a person's death can give rise to, their diagnosis and their medical and legal importance.
16. Identify a case of intoxication and solve the main medico-legal problems posed by it.
17. Identify sources for obtaining information to conduct an expert appraisal and link them.

18. Identify the ethical principles of medical law, forensic pathology, forensic psychiatry and clinical bioethics in relation to problems that may arise, such as rape, transplantation, the right to life, parenthood and donation.
19. Interpret toxicological analyses in a medico-legal context.
20. Link medical and/or psychiatric pathology with the legal implications of the rules governing it (accountability, civil capacity, etc.).
21. Perform the differential diagnosis between natural death and legal death and, within the latter, differentiate between sudden death and death from violence.
22. Write a forensic autopsy report, a report on violence and a psychiatric report.
23. Write the medico-legal documents that pertain to professional medical practice.

## Content

Legal medicine and toxicology. Medical law and health legislation. Medical deontology and clinical bioethics. Medical-legal documents Professional secrecy and clinical information. Informed consent. Medico-legal and administrative-health criteria on human reproduction, clinical research and experimentation, right to life and dignified death, diagnosis of death and clinical use of corpses and occupational disability and bodily harm. Forensic pathology. Forensic Thanatology. Forensic sexology. Forensic psychiatry. Medical study of cause of death, aggressions, violent deaths and social behaviors. Criminalistics Forensic toxicology and human poisoning. Toxicinetic. Body damage assessment

Acute poisoning (AI): Epidemiological aspects. Diagnosis, clinical manifestations. Value of the laboratory. Therapeutics (I): General measures. Therapeutics (II): Specific decontamination measures. - Therapeutics (III): extractive techniques. Preparation of a standard form. Barbiturates Benzodiazepines.

Cyclic antidepressants. Phenothiazines Paracetamol. Salicylates. Opiates Amphetamines

Methanol Ethanol. Ethylene glycol. Organophosphorus insecticides. Organochlorine insecticides. Herbicides: Paraquat. Caustics Plants. Mushrooms Poisonous Gases Metals

Distributive blocks

A. Legal medicine and toxicology: concept, historical evolution. Medicine in law: medical aspects contained in the law of criminal prosecution and codes. Organization of legal and forensic medicine. Organs of the administration of justice related to medical praxis.

B. Medical law and health legislation: professional medical law, professional activity, responsibility in medical praxis, general legal theory of responsibility, hierarchical exercise, responsibility of institutions and health administration.

C. Medical deontology and clinical bioethics: concept of deontology and clinical bioethics Critical analysis of national deontological codes and international medical and social declarations. Situation of critical confluence of rights in medicine. Conscientious objection in medical praxis.

D. Medical-legal documents: ordinary medical certificates, medical certificate of death, part of injuries and death, expert reports, declaration, minutes, social significance, crime of falsification of documents. Dressmaking standards. The clinical history

E. Professional secrecy and clinical care information. The professional secret in modern medicine. Preparation, manipulation and use of clinical-care information. Analysis of regulations and assessment of responsibilities.

F. Informed consent: medicolegal requirements of valid consent. Discharge documents of care responsibility. Norms of action in limited clinical states. Legislation.

G. Medical and administrative-health criteria on human reproduction, research and clinical experimentation: birth control, medical, ethical and social criteria on sexuality and family planning. Medical legal assessment of contraception and sterility. Medical-legal assessment of assisted reproduction. Voluntary abortion: assessment of medical, social, ethical and legal criteria. Critical analysis of current legislation. Clinical research: analysis of ethical and legal standards. Ethics committees

H. Right to life and dignified death, diagnosis of death and clinical use of corpses. Survival and cessation of life. Levels of human life, medical assessment, social ethics of care and availability of clinical maintenance means. Dignified death: analysis of the concepts of natural death, euthanasia and dysthanasia. Ethical and legal problems of the terminally ill. Living will. Medicolegal criteria of the diagnosis of death. Right to the corpse: medical-legal assessment of the availability of the corpse and its organs. Law of transplants, autopsies and mortuary health police.

I. Disability and bodily harm: social medical assessment. Expert technique. Deferred highs. Post-traumatic diseases. Disabilities and disabilities. Work Medicine. Business medical services.

J. Forensic pathology: aggressions, child abuse, domestic violence and mistreatment to the elderly, torture. Mechanical suffocation: hanging, strangulation, suffocation and submersion. Wounds by knives and fire. Land, sea and air traffic accidents. Injuries by physical agents: thermal, electrical and baric trauma. Fall and precipitation.

K. Forensic Thanatology: cadaverous phenomena, autolysis and putrefaction, natural phenomena of conservation, artificial conservation of the corpse. Date of death, vital and postmortal injuries.

L. Medicolegal study of the cause of death, violent deaths. Judicial diligence of removal of the corpse, necropsy, researches

## Methodology

This guide describes the framework, contents, methodology and general rules of the subject, in accordance with the current curriculum. The final organization of the same with regard to the number and size of the groups, distribution in the calendar, dates of exams, specific evaluation criteria and review of exams, will be specified in each of the Hospital Teaching Units (HTU), which explain through their web pages and the first day of class the subject for the responsible of the same in each HTU.

Exceptionally and according to the criteria of the responsible teachers, the resources available and the health situation of each moment in the different Teaching Units, part of the contents corresponding to the theoretical lessons, practica and seminars may be taught in person or virtually.

During the current course the professors appointed by the Department as responsible for the subject at the Faculty and HTU level are:

Departament (s) responsible (s): Departament de Psiquiatria i de Medicina Legal

Santiago Crespo Alonso

Responsables HTU

Responsables UDHSP	Responsables UDHVH	Responsables UDGtiP	Responsables UDHPT
Dr. Santiago Crespo Alonso 27790sca@comb.cat	Josep Manel Tortosa	Jose Castellà Garcia (jose.castella@xij.gencat.cat)	Galtés Vicente, Joan Ignasi

General teaching methodology:

Credits subject: 4.5 ECTS = 112.5 hours

AUTONOMOUS BLOCK (50% total = 56.25 hours).

Comprehensive reading of texts and articles, study and realization of schemes, summary and conceptual assimilation of the contents. Preparation of presentations and their exposition.

ASSESSMENT (5% total = 5,625 hours): continuous evaluation

Theory ( TE typology). Group size: registration group. Scheduled sessions 44.6h (1h per session).

Specialized seminars (SESP typology). The standard size is 20 and the split is established from 25 students per group. Scheduled sessions: 3 sessions of 2 hours.

Clinical care practices (PCA). Size of the group; distributed in groups throughout the week and by semester. 15 hours. The clinical practices are carried out in PCA, PAUL, SCC I / O PSCA format, depending on the characteristics and endowment of each teaching unit.

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.

## Activities

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Clinical practices PCA, PAUL, SCC i/o PSCA)*	15	0.6	
specialized seminars	6	0.24	
theory	30	1.2	
Type: Autonomous			
Self study	40	1.6	
reading articles / reports of interest	16	0.64	

## Assessment

The objective test will consist of a multiple-choice test of 100 questions, where there is only one correct answer. One correct one out of four is subtracted. The result of the exam represents 50% of the final grade. 30% of the grade will come from the evaluation of a report or oral presentation of a topic that you will choose. Said report or presentation will deal with forensic pathology, assessment of corporal damage, forensic psychiatry, toxicology. The activity of recognition of the corpse is valued with 10% of the note. The remaining 10% comes from the discussion of a clinical case, through oral defense, or presentation of a report or short questions about it.

The methodology and form of evaluation must be explained on the first day of class and be clear enough for the student.

Students who have not passed the subject / module by means of continuous assessment may present a final exam or a recovery test, which will never serve to improve the qualifications

Students who do not perform the theoretical and practical assessment tests will be considered as not evaluated exhausting the enrollment rights of the subject.

Students have the right to review the exam practiced. It is the function of the responsible teacher to establish a date for the same and the review criteria (discussion of a suspended-approved note, no presentation to upload a note, revision only of scoring errors, etc.)

## Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Assessments written by objective tests: multiple-choice items / large-question essay tests / restricted-choice essay tests	50%	2	0.08	5, 9, 6, 7, 8, 13, 12, 11, 15, 18,

				16, 19, 21, 23, 20, 1, 3
Clinical cas. Restricted or oral test or presentation report	10%	0.5	0.02	4, 5, 13, 10, 15, 14, 18, 17, 21, 22, 20, 2
Expert report, test of open or oral questions or presentation of a report	30%	2	0.08	4, 10, 17, 20, 2, 3
Recognition of a cadaver: restricted or oral trial test, or presentation report	10%	1	0.04	4, 9, 7, 13, 15, 14, 17, 21, 22, 2

## Bibliography

### Specific bibliography

- Dominick J. DiMaio. Vincent JM DiMaio. Forensic Pathology. Boca raton. FL CRC Press. 1993
- Spitz and Fisher. Medicolegal Investigation of death. London. Charles C. Thomas. Publisher Springfield. 1993
- Barry AJ Fisher. Techniques of Crime Scene Investigation. Boca raton. FL. CRC Press. 1993
- William Eckert. Introduction to Forensic Sciences. Boca Raton. FL. CRC Press. 1992
- Vernon J. Geberth. Practical Homicide Investigation. Boca Raton. FLCRC Press. 1993
- Santiago Delgado Bueno. Psiquiatria Legal y Forense . Colex. 1994
- Cesar Borobia Fernández. Valoración de los daños personales causados en los accidentes de tráfico. La Ley Actualidad

### Reference bibliography

- Gisbert Calabuig. Medicina Legal y Toxicología. Masson. 6th. Barcelona. 2003

### Internet resources

- Catalan Association of Forensic Medicine
- CLINICAL TOXICOLOGY:
- Internal Medicine. Farreras / Rozman.
- Principles of Internal Medicine. Harrison.
- Medical Toxicology. Matthew J Ellenhorn, Barceloux DG.
- Clinical Toxicology. L Marruecos, S Nogué, J Nolla.

Internet resources: Toxi-NET at <http://wzar.unizar.es/stc/toxicologianet>