

## Faculty of Law



### ECRI1502 Introduction to biomedical Sciences in relation with Criminology

[30h] 4 credits

This course is taught in the 2nd semester

**Teacher(s):** Frédéric Bonbled  
**Language:** French  
**Level:** First cycle

#### Aims

Initiation being studied biomedical sciences and criticizes biological theories in relation to criminology. Synthetic presentation of the essential assets of sciences in biology, physiology and anatomy, by developing the fields more particularly criminological (and criminalistic).

#### Main themes

Progressive study of the molecular and cellular levels at the systemic level, of normal with the pathological one. Acquisition of the bases of the reasoning and the scientific method in biomedical sciences. The course will study the following matters (their access being in particular directed on a preparation and an initiation with medico-legal and criminalistic knowledge): cellular biology; development in growth; molecular genetics, heredity and analysis ADN; elements of immunology, neurobiology and hematology; fibres and hairs; bases of toxicology; elements of respiratory physiology; cardiovascular, of the nutrition and the reproduction; psychotropic drugs, drugs, dependences and behaviors; elements of physiopathology and anatomopathology of behavioral anomalies and causes of death; elements of medico-legal anthropology; biological and legal identity. Biological theories of criminality.

#### Content and teaching methods

After recalls of cellular biology, the talks will radiate starting from the study of a fictive "scene of crime" . The biological and different indices collected (traces of bleedings, hair, prints, projectiles...) will be exploited thoroughly by systematically revisiting the means arising of biomedical sciences and the contributive elements

- of human anatomy, histology, pathology and physiology (blood circulation and cardiac function, hematology - blood and its components - bleeding and haemostase, respiratory function),
- of medical biology (bloods' analysis)
- of toxicology (search for poisons on blood and other sampling; study of their distribution and sites, clinical effects, clinical effects of the acute or chronic intoxication, dependence) by visiting the anatomy and digestive physiology, the hepatic and renal function (metabolisation, elimination),
- of personal identification (biology of the reproduction, heredity, molecular genetics, applications of the genetic print and analysis of the ADN) by extending the study to questions of anthropology, of dermatology versus fingerprint, hair and hairs),
- of immunology and microbiology (serology, preexistent infection (virus) and secondary with the lesion and inflammation)

The elements of growth and development, of functional anatomy of the central nervous system (neurobiology, including the hormonal system), the organs des sens, the great principles of the biological theories of criminality will be also approached. Finally some non-biological indices (ballistics...) will be studied in a distinct way and will be reported to the biological observations

#### Methods

Exposed ex-cathedra structuring a study of documentary elements referred, personal and by groups, gradually set up on i-campus, and articulated on an iconography presented in "powerpoint", returning systematically to the concrete situations presented in introduction of the course. Le logiciel avait traduit "organes des sens" par "the bodies of the directions" : pouvez-vous me suggérer une autre traduction anglaise ???

**Other information (prerequisite, evaluation (assessment methods), course materials recommended readings, ...)**

Lectures structuring a preliminary study of documentary elements, gradually set up on the net( i-campus), and articulated on an iconography, returning systematically to the concrete situations presented in introduction of the course.

Evaluation : written exam (QCM)

**Other credits in programs**

<b>CRIM1PM</b>	Année d'études préparatoires au master en criminologie	(4 credits)	Mandatory
<b>CRIM21</b>	Première licence en criminologie	(4 credits)	
<b>CRIM21MS</b>	Première année du master en criminologie, à finalité spécialisée	(4 credits)	