COURSE DATA

Data Subject	
Code	35084
Name	Applied Toxicology and Psycopharmacology
Cycle	Grade
ECTS Credits	4.5
Academic year	2024 - 2025

Study (s)

Degree	Center	Acad. year	Period
1302 - Degree in Criminology	Faculty of Law	4	Second term
1923 - Double Degree Programme Law-Criminology	Faculty of Law	4	Second term

Subject-matter

Degree	Subject-matter	Character
1302 - Degree in Criminology	19 - Applied criminology	Optional
1923 - Double Degree Programme Law-Criminology	6 - Year 4 optional subjects	Optional

Coordination

Name	Department
ROMERO MARTINEZ, ANGEL	268 - Psychobiology
RUIZ LEAL, MARIA JOSE	265 - Prev. Medicine, Public Health, Food Sc.,Toxic. and For. Med.

SUMMARY

Applied Toxicology is an optative course that is attends in the 4th year of the Degree in Criminology. It has a value of 4.5 credits and it is part of the itinerary "Applied Criminology".
The main objective is the formation Toxicological on the effects of toxic or mixtures of them in order to gain knowledge leading to the identification of the toxic agent used in a criminal action in all types of crimes both against life and bodily integrity, as against public health and the environment.

The course provides knowledge to work with an expert in expert reports in the field of toxicology to what

it will be study the pathways, metabolism and mechanisms of action of toxic agents as well as it will be considered the analytical matrices more appropriate to each situation, methods of determination, interpretation of results and drafting of toxicology reports.

The subject provides knowledge about the neurobiological mechanisms and physiological and behavioral aspects of psychoactive drugs, which are considered essential for licensed professionals in Criminology. Within biological knowledge includes both the role of the biological basis for mental disorders, and the effects of psychoactive drugs on the brain and behavior, relating to interventions that allow the prevention and control of mental illness. It also offers the Diploma in Criminology knowledge of the sources of information you should go to expand and update their information over their work.

For this purpose, it is begin under the conceptual delimitation and the history and methodology used in Psychopharmacology. After that it is analyzed the biological and psychopharmacological treatment of mood disorders and anxiety, psychotic and cognitive disorders. All with an integrated perspective focused on the consequences and implications for violent and criminal behavior.

PREVIOUS KNOWLEDGE

Relationship to other subjects of the same degree

There are no specified enrollment restrictions with other subjects of the curriculum.

Other requirements

It is recommended interest on toxicological studies as well as criminal psychology and neuroscience. It is also useful the knowledge and use of sources and databases in Toxicology, Criminology, Psychology, Psychiatry and Sociology. It is relevant English skills and statistics.

COMPETENCES (RD 1393/2007) // LEARNING OUTCOMES (RD 822/2021)

1302 - Degree in Criminology

- Saber aplicar técnicas y procedimientos para la resolución de problemas y la toma de decisiones.
- Ser capaz de apreciar la complejidad y diversidad del fenómeno criminal.
- Saber trasladar a un informe criminológico los datos psicológicos, sociales y jurídicos de relevancia criminológica.
- Saber seleccionar los datos con relevancia criminológica que sean útiles para emitir una resolución judicial.

- Saber hacer estudios en barrios marginales o de acción social preferente, elaborando estrategias de prevención y/o intervención de la criminalidad.
- Saber asesorar en la interpretación y valoración de los informes forenses.
- Saber emplear términos criminológicos y de seguridad en lengua inglesa.
- Ser capaz de aplicar los conocimientos psicosociales al estudio y comprensión de las nuevas formas de criminalidad.
- Ser capaz de analizar el delito, el delincuente y la víctima, y diseñar estrategias de prevención e intervención, desde el respeto a los derechos humanos, la igualdad entre hombres y mujeres, la paz, sostenibilidad, accesibilidad universal y diseño para todos y valores democráticos.

LEARNING OUTCOMES (RD 1393/2007) // NO CONTENT (RD 822/2021)

The results of training will be:
1. To Acquire knowledge on toxics and processes occurring in the organisms, analytical techniques for the determination of toxics and ability to interpret toxicological results.

2. Place the subject Psychopharmacology both in the context of psychology and neurosciences.
3 - Understand the concept and history of psychopharmacology.
4 - Identify and interpret the main techniques applied in Psychopharmacology.
5- Understand the biological basis and different psychopharmacological treatments of mood disorders.
6- Understand the biological basis and main psychopharmacological treatments of anxiety disorders.
7- Understand the biological basis and different psychopharmacological treatments of psychotic disorders.
8- Know the biological basis and different psychopharmacological treatments of cognitive disorders.
9-Understand the relevance of therapeutic and side effects of psychopharmacological treatments, mainly focalized in criminal and violent behavior.

DESCRIPTION OF CONTENTS

1. Basic Toxicology

Basic Toxicology: Concepts and definitions. Process of toxics in the organism. Toxic effects of physical, chemical and biological agents.

2. Analytical Toxicology

Analytical Toxicology: Samples for analysis. Phases of toxicological analysis. Identifying toxic agents. Interpretation of analytical results.

3. Psychopharmacology

History of Psicopharmacology and fundamental concepts.
Neurobiology of mental disorders.
Mood disorders: antidepressants and stabilizers.
Anxiety Disorders: Ansiolitic and hypnotic.
Schizophrenia: antipsychotic.

WORKLOAD

ACTIVITY	Hours	% To be attended
Theoretical and practical classes	45,00	100
Attendance at events and external activities	3,50	0
Development of group work	9,00	0
Development of individual work	12,00	0
Study and independent work	10,00	0
Readings supplementary material	6,00	0
Preparation of evaluation activities	10,00	0
Preparation of practical classes and problem	7,00	0
Resolution of case studies	10,00	0
TOTAL	**112,50**	

TEACHING METHODOLOGY

Lectures with resolution of questions. Cooperative learning. Using ICTs. Approach and resolution of practical cases.

Preparation and presentation of group work. Specialized seminars. And practical tasks. Visits to institutions.

Comprehensive reading of texts and materials. Ongoing of course and resolution of practical clinical cases.

Expression oral/written of knowledge.

EVALUATION

The evaluation of the course is determined with reference to the following criteria and percentages:
1) Evaluating the tasks and activities carried out: 40%.
2) Final evaluation: 60%.

REFERENCES

Basic

- Lorenzo, P., Ladero, J.M., Leza, J.C., y Lizasoain, I. (2009). Drogodependencias. Farmacología, Patología. Psicologia. Legislación. Ed. Médica Panamericana.
- Morant I et al. (2011). Toxicología Clínica. Difusión Juridica y Temas de Actualidad, Madrid.
- Moya-Albiol, L. y Romero-Martínez, Á. (2020). Neurocriminología. Pirámide
- Nogué-Xarau, S. (2019). Toxicología clínica: bases para el diagnostico y tratamiento de las intoxicaciones en Servicios de urgenicas, áreas de vigilància intensiva y unidades de toxicologia. Elsevier España, S.L.U.
- Stahl, S.M. (2018). Psicofarmacología Esencial de Stahl. Casos Clínicos. Grupo Aula Médica.
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Additional

- Carlson, N.R. (2018). Fisiología de la conducta, 12ª edición. Pearson Educación.
- Davis, J. (2022). Sedados. Capitán Swing.
- Fernández-Teruel, A. (2011) Psicofarmacología, terapias psicológicas y tratamientos combinados II: eficacia comparada en los trastornos mentales. Editorial UOC.
- Perry, B., y Szalavitz, M. (2020). El chico a quien criaron como perro. Capitán Swing.
- Repetto, M. (2009) Toxicología Fundamental. 4 ed. Díaz de Santos, Madrid
- Salazar, M. (2011) Manual de Psicofarmacología. Editorial Médica Panamericana.
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  https://www.aemps.gob.es/medicamentos-de-uso-humano/estupefacientes-y-psicotropos/