COURSE DATA

Data Subject	
Code	42466
Name	Neurobiology of drug dependence
Cycle	Master's degree
ECTS Credits	15.0
Academic year	2022 - 2023

Study (s)

Degree	Center	Acad. year	Period
2225 - M.U. en Investig, Tratam. y Patología en Drogodep.	Faculty of Psychology and Speech Therapy	1	First term

Subject-matter

Degree	Subject-matter	Character
2225 - M.U. en Investig, Tratam. y Patología en Drogodep.	2 - Neurobiology of drug dependence	Obligatory

Coordination

Name	Department
MANZANEDO PEREZ, CARMEN	268 - Psychobiology
MONTAGUD ROMERO, SANDRA	268 - Psychobiology

SUMMARY

The course "Neurobiology of drug addiction" covers the basics in drug addiction, will be offered a classification and explain the pharmacology and mechanisms of action of drugs with addictive capacity (legal and illegal). Later will address the main preclinical models in drug addiction.

PREVIOUS KNOWLEDGE

Relationship to other subjects of the same degree

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

Other requirements

have completed the module 1

OUTCOMES

2096 - M.U. en Investig, Tratam. y Patología en Drogodep. 10-V.1

- Students should be able to integrate knowledge and address the complexity of making informed judgments based on incomplete or limited information, including reflections on the social and ethical responsibilities associated with the application of their knowledge and judgments.
- Students should communicate conclusions and underlying knowledge clearly and unambiguously to both specialized and non-specialized audiences.
- Students should demonstrate self-directed learning skills for continued academic growth.
- Demostrar una comprensión sistemática del campo de las drogodependencias y el dominio de las habilidades y métodos de investigación relacionados con dicho campo.
- Diseñar e identificar áreas o tema prioritarios necesarios para ser investigados en el ámbito de las drogodependencias.
- Aportar técnicas de investigación en el ámbito de la investigación básica y su posible traslado como modelo explicativo en la investigación con seres humanos.
- Poseer las habilidades de aprendizaje para proponer estrategias y diseños experimentales de acuerdo con los resultados de los diferentes experimentos que se han comentado y que son paradigmáticos en el área de las drogodependencias.
- Saber clasificar y conocer los mecanismos básicos de las diferentes drogas con capacidad adictiva, legales e ilegales.
- Poder relacionar las diferentes teorías neurobiológicas que explicar la etiología y el desarrollo de la adicción a las drogas.
- Conocer los diferentes modelos preclínicos, modelos animales experimentales que se utilizan en la investigación en drogodependencias.
- Conocer los diferentes mecanismos de acción específicos de las diferentes drogas que se estudien y relacionarlos con las teorías neurobiológicas, genéticas y sociales que se han aprendido anteriormente.

LEARNING OUTCOMES

Know and understand the basic mechanisms of different drugs with addictive capacity, legal and illegal. Understanding the basic mechanisms of drugs and neurobiological theories that explain the etiology in the development of addictive behavior to drugs.

Know the different preclinical models, experimental animal models used in research in drug addiction. Know the different specific mechanisms of action of different drugs to be studied and relate neurobiological theories, genetic and social changes that have previously learned.

DESCRIPTION OF CONTENTS

1. Basic concepts in drug addiction. Classification and mechanisms of action of drugs with addictive capacity (legal and illegal).

2. Preclinical models of drug addiction

3. Substance Abuse. Specific mechanisms of drugs: absorption, metabolism and specific mechanism of action of each drug.

WORKLOAD

ACTIVITY	Hours	% To be attended
Theory classes	150,00	100
Attendance at events and external activities	20,00	0
Development of group work	10,00	0
Development of individual work	40,00	0
Study and independent work	40,00	0
Readings supplementary material	20,00	0
Preparation of evaluation activities	40,00	0
Preparing lectures	50,00	0
Preparation of practical classes and problem	30,00	0
TOTAL	**400,00**	

TEACHING METHODOLOGY

Sessions. They consist of the corresponding theoretical exposition of the subject. This lecture model that allows the teacher to present the most relevant aspects of each topic. The involvement, as they provide knowledge. Also, in these sessions, students who have worked independently of theoretical and practical aspects related to the topics studied, may submit and present in the classroom work. Also in these sessions, students will undertake practical activities related to the theoretical purchased.- Non-contact sessions. Are intended to encourage the construction of knowledge by the student. It calls for the student in activities to their own learning activity may be to search for documentary information specialist, a proven and justified reflection on a particular topic in class apply knowledge.- Tutorials. The student has a large number of hours of tutoring in which the teacher guides the students individually or in small groups to build their knowledge. The guidance in the preparation of the work, solves doubts or difficulties related to the subject. It also provides the forum for consultation of the Virtual Classroom. Moreover, in this virtual space, students can find documents, information and news relevant to the materials of different modules.In addition to these methods of learning, there will be "complementary activities" to supplement the education of students with Conferences, Expert Panel, seminars, workshops, visits, Cineforum.

EVALUATION

The knowledge, skills and competencies acquired are assessed continually through student participation in individual and group training activities of the module materials. In addition to the continued evaluation of the theoretical and practical work of students in different subjects of the module, the student upon completion of the test module will return on the level of skills modules, content and learning activities.

In the syllabus of the different subjects included in this module, the weight that each assessment section (attendance, projects, exam, etc.) has in the final grade is explicitly specified. In addition, it also specifies the differences in the assessment between the first and second call, as well as the sections that can or cannot be retaken and the existence of any minimum requirements to pass the subject.

REFERENCES

Basic

- Aguilar MA, Miñarro J, Rodríguez M. (coordinadores) (2017). Neurobiología de las Drogodependencias para estudiantes del Master Oficial Investigación, Tratamiento y Patologías Asociadas en Drogodependencias (DITPA). Ed. Gráficas Alhorí. Valencia.

Belin-Rauscent A, Fouyssac M, Bonci A, Belin D. (2015) How Preclinical Models.Evolved to Resemble the Diagnostic Criteria of Drug Addiction. Biological Psychiatry, In Press Corrected Proof. Published online: January 28, 2015.

Carlson NR. (2010). Fisiología de la conducta. Ed. Pearson.(10º edición).

Golstein A. (1995). Adicción. Ediciones en Neurociencias. Barcelona.

Lorenzo P, Ladero JM, Leza JC, Lizasoain I (2009). Drogodependencias. Ed. Médica Panamericana.

Madrid.

Ikemoto S, Bonci A (2014) Neurocircuitry of drug reward. Neuropharmacology, 76:329341.

Koob GF, Le Moal M (2006). Neurobiology of addiction. Academic press.

Koob G, Arends M, Le Moal M (2014). Drugs, Addiction and the Brain. Academic Press.

Manzanedo C (2020) Neurobiología de las drogodependencias (42466) Conceptos básicos en drogodependencias. Máster Oficial DIPTA. Ed. Ángeles Carrillo Baeza. Valencia.

Pérez de los Cobos J, Valderrama JC, Cervera G, Rubio G (2006). Tratado SET de Trastornos Adictivos. Médica Panamericana, Madrid.

Redolar Ripoll D (2008). Cerebro y adicción. Editorial UOC. BArcelona.