

## 1. BASIC INFORMATION

<b>Course</b>	Psychopharmacology
<b>Degree program</b>	Bachelor's Degree in Psychology
<b>School</b>	Biomedical and Health Sciences
<b>Year</b>	Fourth
<b>ECTS</b>	6
<b>Credit type</b>	Optional
<b>Language(s)</b>	English
<b>Delivery mode</b>	Campus-based
<b>Semester</b>	S1
<b>Academic year</b>	2024-2025
<b>Coordinating professor</b>	Elina L. Boycheva
<b>Professor</b>	Elina L. Boycheva, Paola García Rosano

## 2. PRESENTATION

“Psychopharmacology” is taught in the first semester of the fourth year of the Bachelors’ degree in Psychology. This course examines the history, rationale, pharmacology, and putative mechanism of action of drugs used in the treatment of disorders of the central nervous system (CNS). Specific drug classes to be considered include antidepressants, anxiolytics, and antipsychotic medications. Emphasis will be placed on neuroscientific processes underlying mental pathology, pharmacological treatment, as well as the neurobiological underpinnings of drug addiction.

## 3. LEARNING OUTCOMES

### Knowledge

KN08: Characterize the different attentional networks, their neuroanatomical bases, the experimental paradigms responsible for their evaluation, and the different neuropsychological diagnoses associated with them.

- Describe the most commonly used active principles in the pharmacological treatment of mental and neurological disorders.
- Describe the alterations caused by substance abuse drugs.
- Identify the causes of the behavioral effects of pharmacological treatments in treated individuals.
- Describe the therapeutic effect of psychotropic drugs in the treatment of psychopathological disorders.
- Relate the effects on behavior resulting from drug consumption to the affected mechanisms.
- Identify the pharmacokinetic and pharmacodynamic principles of psychotropic drugs

### Competences

COMP10: Ability to analyze the needs and demands of the recipients of the function in different contexts.

COMP11: Ability to establish the goals of psychological intervention in different contexts, proposing and negotiating the goals with the recipients and those affected.

COMP24: Ability to define the objectives and develop the intervention plan based on its purpose (prevention, treatment, rehabilitation, integration, support...).

COMP36: Knowledge and adherence to the ethical obligations of Psychology.

COMP37: Ability to practice the profession using the English and/or Spanish language, both with specialized and non-specialized audiences.

## 4. CONTENT

1. Introduction: history of psychopharmacology; structure and function of the nervous system
2. Research methods in neuropsychopharmacology
3. Principles of psychopharmacology, pharmacokinetics, and pharmacodynamics
4. Chemical signaling
5. Major neurotransmitter systems
6. Psychopharmacology of psychosis: antipsychotics
7. Psychopharmacology of anxiety and phobias: anxiolytics
8. Depression and psychotropic drugs: antidepressants
9. Drug abuse. Drug addiction and reward systems

## 5. TEACHING-LEARNING METHODOLOGIES

The types of teaching-learning methodologies used are indicated below:

- Lectures
- Problem solving
- Case studies
- Oral presentation

## 6. LEARNING ACTIVITIES

Listed below are the types of learning activities and the number of hours the student will spend on each one:

### Campus-based mode:

Learning activity	Number of hours
Lectures	23h
Asynchronous lectures	7h

Self-study	50 h
Formative evaluation	3h
Test of knowledge	2h
Problem solving	25 h
Tutorials	5 h
Research	15 h
Practical activities	20 h
<b>TOTAL</b>	<b>150h</b>

## 7. ASSESSMENT

Listed below are the assessment systems used and the weight each one carries towards the final course grade:

### Campus-based mode:

Assessment system	Weight
<b>Test of knowledge</b> (Exam-1 25% + Exam-2 25%)	50%
<b>Case Study and problem-based learning</b> (Case Study 10% + Written report of problem-based learning 20%)	30%
<b>Oral presentation</b>	10%
<b>Portfolio</b> (Activity 1: 5% + Activity 2: 5%)	10%

**Integrated Curriculum Activity:** Additionally, the course includes an activity that requires coordination with courses from different years of the Psychology degree. Participation in this activity requires mandatory classroom attendance, and its content may be included in the exam material.

When you access the course on the *Campus Virtual*, you'll find a description of the assessment activities you have to complete, as well as the delivery deadline and assessment procedure for each one.

### Attendance

According to Art. 1.4 of the Regulation for the Evaluation of Official Degree Degrees of the European University of Madrid (of the continuous evaluation): "The obligation to justify at least 50% attendance at classes is established as part of necessary for the evaluation process and to comply with the student's right to receive advice, assistance and academic follow-up from the teacher. For these purposes, students must use the technological system that the University puts at their disposal, to accredit their daily attendance to each of their classes. This system will also serve to guarantee objective information on the active role of the student in the classroom.

Those students who have not achieved a 50% attendance rate in the first exam period may be graded as failing and must pass the corresponding objective exams in the second exam period for the subject, where they must obtain a grade equal to or higher than 5.0 out of 10.

### 7.1. First exam period

To pass the course in the first exam period, you must obtain a final course grade of at least 5 out of 10 (weighted average). In any case, you will need to obtain a grade of at least 5 out of 10 in:

- the final exam (Test of Knowledge)
- each compulsory activity for it to count towards the final grade of the subject (*Case Study Activity + Written report of problem-based learning + Oral presentation + Portfolio Activity 1 + Portfolio Activity 2*).

The mandatory activities will be facilitated as the subject progresses. To obtain the points corresponding to this section it is essential to deliver the mandatory activities by the indicated date. Each mandatory activity would be graded from 0-10. A grade of 5 is necessary in each activity to compute the activity into the final grade. Otherwise, the student will be considered suspended in the first exam period and will be qualified with a grade of 4 in the subject. Each mandatory activity or final exam grade, in which the student has not reached the minimum requirement (minimum grade of 5) will need to be re-done and re-submitted in the Second Exam Period for its assessment.

The final exam is divided into two parts: the first exam (November) will cover the first half of the course contents and the second exam (January) will cover the second half of the course contents. Students do not have to pass each exam independently, a mean score will be calculated from both exam grades, which will represent the final exam grade. Thus, the mean score of both exams must be equal to or higher than 5 in order to pass the final exam. Those students whose mean score of both exams is lower than 5 will fail the subject in the first exam period and will be re-evaluated in the second exam period on those parts of the exam which they failed.

### PLAGIARISM AND USE OF AI

Each student is expected to be the author of all their submitted work. Those students who plagiarize any of the proposed activities will obtain a grade of 0 in such activity.

Artificial Intelligence Generated Content: Artificial Intelligence Generated Content (AIGC) tools, such as ChatGPT and other language models (LLMs), cannot be used to generate activities/essays/reports. These tools cannot be responsible in any case for the content written in the work. The use of AI must be authorized by the teacher in each activity. If a student has used these tools to develop any part of their work, their use must be described in detail in the activity. The student is fully responsible for the accuracy of the information provided by the tool and for correctly referencing any supporting work. Tools used to improve spelling, grammar, and general editing are not included in these guidelines. The final decision on the appropriateness of the reported use of an artificial intelligence tool rests with the teacher, the academic coordination, and the direction of the degree.

### Delayed submission of mandatory activities

Delayed submission of mandatory activities will not be allowed. Students must respect the deadline set by the professor, as the system in the virtual campus will not allow any delayed submission after the

deadline. Failure to comply with the delivery deadlines for mandatory activities will result in non-evaluation of the activity, assigning a numerical grade of 0.

### Simulation

Whenever simulations are conducted, it will be mandatory for the student to wear the corresponding uniform (shirt and pants) to the simulated hospital. Students who do not arrive with the complete uniform will forfeit their right to attend the simulation and will receive an absence for it. The attendance to the simulation session is mandatory. If a student does not attend the simulation, he/she will fail the course in the first exam period and will be re-evaluated on this section during the second exam period.

## 7.2. Second exam period

To pass the course in the second exam period, you must obtain a final grade of at least 5 out of 10 (weighted average). The student must deliver the activities not successfully completed in the first exam period after having received the corresponding corrections from the professor, or those that were not submitted in the first place. All the activities will be evaluated following the same guidelines as in the first exam period, except for the simulation.

To pass the course in the second exam period, you must obtain a final course grade of at least 5 out of 10 (weighted average). In any case, you will need to obtain a grade of at least 5 out of 10 in:

- the final exam (Test of Knowledge)
- each compulsory activity for it to count towards the final grade of the subject (*Case Study Activity + Written report of problem-based learning + Oral presentation + Portfolio Activity 1 + Portfolio Activity 2*).

### Simulations Recovery in the Second Exam Period (Extraordinary Call)

The Simulations re-take will be performed through the analysis of a clinical case for which students should demonstrate comprehension of the key competencies that have been acquired and practiced during the course. A written report will be required.

## 8. SCHEDULE

This table shows the delivery deadline for each assessable activity in the course:

Assessable activities	Deadline
Portfolio Activity 1	Week 3
Exam 1	Week 10
Portfolio Activity 2	Week 11
Case study (Case Study and problem-based learning)	Week 13
PBL written report (Case Study and problem-based learning)	Week 14
PBL oral presentations (Oral presentations)	Week 15

This schedule may be subject to changes for logistical reasons relating to the activities. The student will be notified of any change as and when appropriate.

## 9. BIBLIOGRAPHY

The main reference work for this subject is:

- Dziegielewski, S.F. (2006). *Psychopharmacology Handbook for the NonMedically Trained*. W W. Norton & Company.
- Ettinger, R.H. (2011). *Psychopharmacology*. Pearson
- Iversen, L., Iversen, S., Bloom, F.E., Roth, R.H. (2008). *Introduction to Neuropsychopharmacology*. Oxford University Press.
- Kelsey, J.E., Nemeroff, C.B., Newpor, D.J. (2006). *Principles of Psychopharmacology for Mental Health Professionals*. Wiley-Liss.
- Lichtblau, L. (2010). *Pharmacology Demystified*. Cengage Learning
- Meyer, J.S., Quenzer, L.F. (2013). *Psychopharmacology: Drugs, the Brain and Behavior*, 2nd ed. Sinauer Associates, Inc
- Muse, M., Moore, B.A. (2012). *Handbook of clinical Psychopharmacology for Psychologist*.
- O'Neal, J., Preston, J., Talaga, M.C. (2010). *Handbook of Clinical Psychopharmacology for Therapists*, 6th ed. New Harbinger Publications
- Preston, J.D., Johnson, J. (2011). *Clinical Psychopharmacology Made Ridiculously Simple*, 7th ed. MedMaster Inc.
- Salazar, M., Peralta, C., Pastor, J. (2004). *Tratado de Psicofarmacología. Bases y Aplicación Clínica*. Editorial Médica Panamericana.
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- Sinacola, R.S., Peters-Strickland, T.S. (2011). *Basic Psychopharmacology for Counselors and Psychoterapist*, 2nd ed. Pearson.
- Stahl, S. M. (2013). *Essential Psychopharmacology: Neuroscientific Basis and Practical Applications*. 4th ed. Cambridge University Press.
- Tylor, D., Paton, C., Kapur, S. (2012). *The Maudsley Prescribing Guidelines in Psychiatry*, 11th ed. Wiley-Blackwell.
- Usher, K., Foster, K., Bullock, S. (2008). *Psychopharmacology for Health Professionals*. Mosby.

## 9. EDUCATIONAL GUIDANCE AND DIVERSITY UNIT

From the Educational Guidance and Diversity Unit we offer support to our students throughout their university life to help them reach their academic achievements. Other main actions are the students

inclusions with specific educational needs, universal accessibility on the different campuses of the university and equal opportunities.

From this unit we offer to our students:

1. Accompaniment and follow-up by means of counselling and personalized plans for students who need to improve their academic performance.
2. In terms of attention to diversity, non-significant curricular adjustments are made in terms of methodology and assessment for those students with specific educational needs, pursuing an equal opportunities for all students.
3. We offer students different extracurricular resources to develop different competences that will encourage their personal and professional development.
4. Vocational guidance through the provision of tools and counselling to students with vocational doubts or who believe they have made a mistake in their choice of degree.

Students in need of educational support can write to us at:

[orientacioneducativa@universidadeuropea.es](mailto:orientacioneducativa@universidadeuropea.es)

## **10. ONLINE SURVEYS**

Your opinion matters!

The Universidad Europea encourages you to participate in several surveys which help identify the strengths and areas we need to improve regarding professors, degree programs and the teaching-learning process.

The surveys will be made available in the “surveys” section in virtual campus or via e-mail.

Your assessment is necessary for us to improve.

Thank you very much for your participation.