

MODULE DESCRIPTION (SUMMARY PROGRAM).

1. Module Information Code:	
• Name of the institution and school	Universidad Autónoma de Nuevo León, School of Medicine
• Name of the course (learning unit)	Pharmacology and Toxicology
• Total number of class hours- theory and/or practice	120 hours
• Total number of hours of independent study	90 hours
• Course modality (face-to-face, online, hybrid)	Face-to-face
• Type of academic term (Semester or four-month)	6th semester
• Type of course (required/elective)	Required
• Curriculum area (ACFGU, ACFB, ACFP-F, ACFP-I)	ACFP-F
• UANL credit points (whole numbers)	7
• Create date (dd/mm/yy)	October 13, 2014
• Date of last amendment made (dd/mm/yy)	January 25, 2021
• Person(s) responsible for the design and amendment of the module:	Dr. med. Lourdes Garza Ocañas Dr. C. María Teresa Zanatta Calderón Dr. C. Eduardo Javier Tamez de la O Dr. C. Christian Tadeo Badillo Castañeda Dr. C. Jesús Triana Verástegui Dr. C. Víctor Armando Tamez Rodríguez Dr. C. Pedro Lennon Sáenz Chávez Dr. C. Sandra Lucía Montoya Eguía Dr. med. Juan Antonio Cuéllar López

2. Purpose:

The teaching of Pharmacology has a main mission: to train professionals with knowledge, skills and attitudes that will allow them, at the end of their degree and throughout their professional lives, an optimal use of medicines in accordance with health needs.

The purpose of this course is to teach the methodological foundations of Pharmacology and Toxicology, to provide students of the degree in Medicine, the scientific knowledge that allows them to select the most effective and safe drugs and therapeutic strategies best adapted to each patient. The learning unit teaches that the objective of pharmacological therapy is to improve the health status of patients, and that this depends on the interrelationship between drugs and patients, in which the therapeutic response, possible side effects and inter-individual variability must be evaluated.

It provides the pharmacokinetic and pharmacodynamic bases of the drugs used in medical therapy which allows a comparison between drugs that have similar indications and to study, foresee and treat the possible adverse effects that occur considering the characteristics of the patient and his or her health status in order to provide optimal treatment, with the least adverse

effects. It also allows the student to analyze the signs and symptoms to diagnose the most frequent intoxications with drugs and/or toxic substances and to select the appropriate treatment; contributing to the resolution of the main health problems of the first level of care.

This Learning Unit is related to Physiology, Biochemistry and Molecular Biology, Pathology and all the Learning Units of the Clinical Area.

Through the implementation of a competency-based model, focused on the acquisition of meaningful learning through problem solving, the development of autonomous learning is encouraged. Problem solving as a learning strategy allows data analysis for decision making with critical and responsible thinking to determine appropriate medical therapy and health care options.

3. Competences of the graduate profile

a. General competences contributing to this learning unit.

Instrumental skills:

1. Apply autonomous learning strategies in the different levels and fields of knowledge that allow them make appropriate and relevant decisions in the personal, academic and professional fields.
2. Use the logical, formal, mathematical, iconic, verbal and non-verbal languages according to their stage of life, in order to understand, interpret and express ideas, feelings, theories and streams of thinking with an ecumenical focus.

Personal and social interaction skills

9. Maintain an attitude of commitment and respect towards the diversity of social and cultural practices that reaffirm the principle of integration in the local, national and international context with the purpose of promoting environments of peaceful coexistence.
10. Intervene in front of the challenges of contemporary society at the local and global level with a critical attitude and human, academic and professional commitment to help consolidate the general wellness and sustainable development.
11. Practice the values promoted by the UANL: truth, equality, honesty, liberty, solidarity, respect for life and anyone's, peace,

respect for nature, integrity, ethics behavior and justice, within their personal and professional environment in order to make a sustainable society.

Integrative skills

13. Take the lead according to social and professional needs to promote relevant social change.

14. Resolve personal and social conflicts in accordance with specific techniques in the academic field and their profession for the proper decision making.

b. Specific competences of the graduate profile that contributes to the learning unit

Professional Clinical Practice

2.- Solves clinical problems through deductive reasoning, interpretation of findings and definition of their nature with the aim of making decisions and determine action principles of the medical practice to follow in a responsible way, impacting individual and collective health.

4.- Manages properly patients with the most frequent diseases from a biopsychosocial perspective, through the application of knowledge, technical procedures and basic diagnostic, based on clinical guides and attention protocols in order to solve the main health problems from the Primary Health Care level from individuals and the community.

6.- Manages human resources, diagnostic interventions, therapeutic modalities, and options on health care according to national standards, promoting a quality culture in attention and guaranteeing patients' security.

4. Summative Evaluation:

- Resolution of a clinical case
- Oral presentation
- Exam
- Course Integrative Product.

5. Course Integrative Product.

Resolution of clinical case(s), by teams, in which the application of a pharmacological treatment is performed, justifying the therapeutic indication according to the current condition and existing comorbidities. Also include a pharmacological description of the treatment administered. Attach two article references.

6. References

- Brunton, Chabner, Knollman. Goodman & Gilman Las Bases Farmacológicas de la Terapéutica. Mexico: McGraw Hill. 13^a Edición, 2019.
- Brunton Hilal-Dandan. Goodman & Gilman Manual de Farmacología y Terapéutica. México: McGraw Hill. 2015.
- Katzung, Masters, Trevor. Farmacología Básica y Clínica. México: McGraw Hill. 14^a Edición, 2019.
- Rang H. P; Dale M. Principios de Farmacología. España: Elsevier. 8^a Edición, 2016.
- Lewis S Nelson Robert S Hoffman, Mary Ann Howland, Neal A Lewin. Lewis L Golfrank, Silas W Smith. Golfrank´ Toxicologic Emergencies. 11^a Edición 2019.

