

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 Learning Unit	Surgical Sciences III (Neurosurgery, Ophthalmology, Otorhinolaryngology)
• <u>Total classroom hours for theory and/or practice.</u>	105 hours
• <u>Total extra classroom hours</u>	45 hours
• <u>Course Modality</u>	Schooled
• <u>Type of academic period in which the module is offered</u>	12th Semester
• <u>Type of Learning Unit in the Curriculum</u>	Compulsory
• <u>Curriculum area:</u>	ACFP-I.
• <u>UANL credit points</u>	5.
• <u>Date of module creation:</u>	May, 2017
• <u>Date of last amendment:</u>	January 9, 2021
• Person(s) responsible for the module design and amendments:	Dr. med. Ángel Martínez Ponce de León. Dr. med. Jesús Mohamed Hamsho. Dr. med. José Luis Treviño González. Dr. Mauricio Arteaga Treviño. Dr. med. Karim Mohamed Noriega. Dr. Marco Antonio Méndez Saenz.

2. Purpose(s)

The learning unit of Surgical Sciences III is realized in the twelfth semester, belongs to the Curricular Area of Integral Professional Formation and includes a core area in the formation of the doctor in the Curriculum of the Degree in Medicine of the UANL, it is part of an educational process in which basic and clinical knowledge is integrated in a multidisciplinary way, developing specific clinical competences, which implies the promotion, evolution and consolidation of the intellectual skills, with an integrating perspective: clinical reasoning (analysis, synthesis and evaluation), procedural skills and attitudinal skills, which prepares the student to exercise with success the medical-surgical activities required.

Its curricular relationship requires knowledge of the structure and function of the human body through the study of Anatomy, Physiology, Histology, Embryology, Microbiology, Biochemistry and Molecular Biology, Pathology, Clinical Pathology, Imaging, Quality and Safety in Care, in order to correlate this knowledge for the evaluation and solution of clinical-surgical problems, through the correct preparation of a clinical history and a physical examination, together with the interpretation of laboratory and imaging studies. It also requires the knowledge of Pharmacology and Toxicology that allows the correct selection of the treatment, taking into account their interactions, as well as with Bioethics for making relevant decisions in their field of influence.

The biopsychosocial perspective is reinforced by treating the patient as a human being with a family and social context and not just treating the disease in isolation.

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.
3. Use the information and communication technologies as access tools to information and its transformation in knowledge, as well as for learning and collaborative work with cutting-edge techniques that allow its constructive participation in society.
4. Dominate their native language in oral and written form with correctness, relevancy, opportunity and ethics adapting its message to the situation or context, in order to transmit of ideas and scientific findings.
5. Employ logical, critical, creative and proactive thinking to analyze natural and social phenomena that let them make relevant decisions in its area of influence with social responsibility.
6. Use a second language, English in particular, with clarity and correctness to communicate in common, academic, professional and scientific contexts.
7. Develop inter, multi and transdisciplinary academic and professional proposals according to the best global practices to promote and consolidate the collaborative work.

8. Use methods and techniques of traditional and cutting-edge research for the development of their academic work, the practice of their profession and the generation of knowledge.

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:

12. Make innovative proposals based on the holistic understanding of reality to help overcome the challenges of the interdependent global environment.

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.

15. Achieve the adaptability required in uncertain professional and social environments of our time to improve living conditions.

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

Scientific Basis of Medicine

1. Use the medicine scientific fundamentals considering economical, psychological, social, cultural and environmental factors which contribute to the development and evolution of a disease for decision-making and medical actions.

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.
3. Evaluate the development and evolution of the disease through the analysis of biomedical information and related physical, social and cultural factors, promoting health education and fostering preventive medicine.
- 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.
5. Manage common medical emergencies, applying treatment, procedures and minor interventions and make appropriate and timely referrals for patients requiring critical care for the preservation of life.
- 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.

Critical Thinking and Research

7. Applies the scientific method for the resolution of medical problems with an innovative, analytic and self-critical attitude for preventing, diagnosing and treating diseases.

Professional Values and Ethics

- 8.- Integrates professional values and ethics into his medical practice, making no difference due to gender, race, political or sexual preference, religious beliefs, activities developed, disabilities or socioeconomic level, promoting social inclusion and contributing to the population's well-being, their life quality and human development.
- 9.- Respects the patient's integrity keeping the patient's medical information as an essential part of their professional secret in order to preserve his rights.

Organizational work

- 10.- Promotes an organizational work culture for the health field, acknowledging the multidisciplinary work, respect for institutional policies and the observance of rules in order to contribute to a comprehensive treatment of patients.

Communication

- 11.- Applies effective communication principles, establishing a respectful and sympathetic relationship with the patient, relatives, the community and other health professionals in order to use the information properly.

4. Summative Evaluation

- Exam
- Evaluation in the clinical practice
- Discussion of clinical cases
- Course Integrative Product

Elaboration and
integration of the
medical history.

Information analysis
and correlation of
basic and clinical
knowledge.

5. Course Integrative Product: Journal of Neurosurgery

Portfolio of clinical evidence.

6. References

Neurosurgery:

Textbook:

Martínez-Ponce de León AR., Morales-Gómez JA. (2016) *Neurocirugía para estudiante de medicina*. Monterrey, México: Tilde Editores.

Suggested bibliography and other reference works

Greenberg, M.S. (2007). *Handbook of Neurosurgery* (6th. ed). [N.Y.USA]: Thieme Medical Publishers.

Besson Mc Dermott, Textbook of Medicine, part x. Disorders of the nervous system and behavior.

Matson, Neurosurgery of infancy and childhood.

Russell, Pathology of the nervous system.

Eyzaguirre, Physiology of the nervous system.

Ford, Diseases of the nervous system in infancy, childhood and adolescence.

Ganong, sistema nervioso.

Merrit, Neurología.

Chusid, Neuroanatomía correlativa y neuroanatomía funcional.

Segura, Neuroanatomía funcional y síndromes neurológicos.

Mayo Clinic and Mayo Foundation, Examen clínico en neurología.

Maumenthler, Neurología.

Fustinioni, Sistema nervioso. Semiología.

Lockhart, Anatomía Humana.

Taveras & Wood, Diagnostic Neuroradiology.

Milhorat, Pediatric Neurosurgery.

Vinken y Bruyn, Handbook of clinical neurology.

Wechsler, Neurología Clínica.

Youmans, Neurological Surgery.

Williams and Wilkins, Clinical Neurosurgery.

Guías de práctica clínica CENETEC.

Medical journals:

Journal of Neurosurgery.

Neurosurgery.
Surgical Neurology.
Journal of Neuroradiology.
Journal of International Neuroradiology.

Ophthalmology:

Textbook:

Oftalmología General. Vaughn y Asbury. Manual Moderno. 14 ed.
Oftalmología: Fundamentos y Conceptos. Frank W. Newel. Ed. Mosby.

Otolaryngology:

Oídos, Nariz y Garganta y Cirugía de Cabeza y Cuello. Autor: Jesús Ramón Escajadillo.
Guías de Otorrinolaringología de la Práctica Clínica del CENET

