

ANALYTICAL PROGRAM.

1. Identification Data:	
• Name of the institution, department, and academic program:	Universidad Autónoma de Nuevo León. School of Medicine. Medical Surgeon and Midwifery
• Name of the learning unit:	Medical Therapeutics
• Hours classroom – theory and/or practice, total:	40
• Frequency:	2
• Total out-of-class hours:	80
• Modality:	Face-to-face
• Type of academic period:	Semester-based
• Type of learning unit:	Mandatory
• Curriculum area:	ACFP-I
• UANL credits:	4
• Date of preparation:	10/02/2017
• Date of last update:	25-07-2024
• Responsible party/parties for the design:	Dr. med. Luis Adrián Rendón Pérez Dra. Olga Graciela Cantú Rodríguez Dr. Pedro Alberto García Hernández Dr. med. Fernando A. Mata Ávalos Dra. med. Lucía Leal Villarreal
2. Presentation:	
Medical Therapeutics is the branch of health sciences that deals with the means used and the method of applying them in the treatment of diseases, aiming to alleviate symptoms or achieve cure. It is dedicated to studying the means of healing, improvement, and rehabilitation of diseases. Treatment can be curative, palliative, prophylactic, or rehabilitative, and may have a placebo effect due to the psychological environment or trust in the doctor.	
3. Purposes(s):	
The purpose of this Learning Unit is to train undergraduate students in medical therapeutics for adults, with an emphasis on the most important and common diseases in the community. In addition to making a correct diagnosis, students must become familiar with the appropriate and timely treatment of the primary health problems in the first level of medical care, in accordance with the graduate profile of the Medical Surgeon and Midwifery degree. This Learning Unit complements all clinical learning units in the degree program. Its curricular relationship presupposes knowledge of human body structure and function through the study of Anatomy, Physiology, Histology, Embryology, Microbiology, Biochemistry and Molecular Biology, Pharmacology and Toxicology, Clinical Pathology and Imaging, and Bioethics. It should integrate the medical history and accurate diagnosis to use that information in the final evaluation of a patient and correctly select the treatment with medications, using the correct dosage while considering interactions and contraindications.	
4. Outline the competencies of the graduate profile	
a. Competencies contributed by this learning unit. Instrumental Competencies: 1. Apply self-learning strategies to establish therapeutic plans in the first level of care that will allow graduates to make timely and relevant therapeutic decisions in personal, academic, and professional contexts. For the proper and timely treatment of the patient, referring the patient to a specialist when necessary.	

2. Use logical, formal, mathematical, iconic, verbal, and non-verbal languages according to the life stage to understand, interpret, and express ideas, feelings, theories, and schools of thought with an ecumenical approach.
3. Manage information and communication technologies as tools for accessing information and transforming it into knowledge, as well as for learning and collaborative work with cutting-edge techniques that allow constructive participation in society.
4. Master the native language in oral and written form with correctness, relevance, timeliness, and ethics, adapting the message to the situation or context to convey ideas and scientific findings.
5. Employ logical, critical, creative, and proactive thinking to analyze natural and social phenomena, allowing for relevant decision-making in their sphere of influence with social responsibility.
6. Use a second language, preferably English, clearly and correctly to communicate in everyday, academic, professional, and scientific contexts.
7. Develop academic and professional interdisciplinary, multidisciplinary, and transdisciplinary proposals based on the best global practices to promote and consolidate collaborative work.
8. Use traditional and cutting-edge research methods and techniques for the development of academic work, professional practice, and knowledge generation.

Personal and Social Interaction Competencies:

9. Maintain an attitude of commitment and respect towards the diversity of social and cultural practices that reaffirm the principle of integration, both locally and globally, to promote peaceful coexistence.
10. Intervene in the face of the challenges of contemporary society, locally and globally, with a critical attitude and human, academic, and professional commitment to contribute to consolidating general well-being and sustainable development.
11. Practice the values promoted by the UANL: truth, equity, honesty, freedom, solidarity, respect for life and others, respect for nature, integrity, professional ethics, justice, and responsibility, in both personal and professional contexts to contribute to building a sustainable society.

Integrative Competencies:

12. Build innovative proposals based on a holistic understanding of reality to contribute to overcoming the challenges of the interdependent global environment.
13. Take on leadership roles committed to social and professional needs to promote relevant social change.
14. Resolve personal and social conflicts using specific techniques in the academic and professional spheres for appropriate decision-making..
15. Achieve the adaptability required by the social and professional environments of uncertainty in our time to create better living conditions..

b. Specific Competencies of the Graduate Profile Addressed by the Learning Unit

Specific Competencies of the Medical Surgeon and Midwifery Degree

Scientific Basis of Medicine

1.- Employ the scientific foundations of medicine, considering economic, psychological, social, cultural, and environmental factors that contribute to the development and progression of diseases, to inform decision-making and medical actions.

Professional Clinical Practice

2.- Solve clinical problems through deductive reasoning, interpretation of findings, and determination of their nature, in order to make decisions and define principles of medical practice responsibly, with an impact on individual and collective health.

3.- Evaluate the development and progression of diseases by analyzing biomedical information and related physical, social, and cultural factors, promoting health education and preventive medicine.

4.- Appropriately manage patients with the most common diseases from a biopsychosocial perspective by applying knowledge, basic technical and diagnostic procedures, and adhering to clinical guidelines and care protocols to address primary health problems at the first level of care for individuals and the community.

5.- Administer human resources, diagnostic interventions, therapeutic modalities, and healthcare options according to national standards, fostering a culture of quality in care and ensuring patient safety.

Critical Thinking and Research

7.- Apply the scientific method to solve medical problems with an innovative, analytical, and self-critical attitude in the prevention, diagnosis, and treatment of diseases.

Professional Values and Ethics

8.- Integrate professional values and ethics into medical practice, without discrimination based on gender, race, political or sexual preferences, religious beliefs, professional activities, disabilities, or socioeconomic status, promoting social inclusion and contributing to the population's well-being, quality of life, and human development.

9.- Respect patient integrity by safeguarding their medical information as a fundamental part of professional confidentiality, ensuring the protection of their rights.

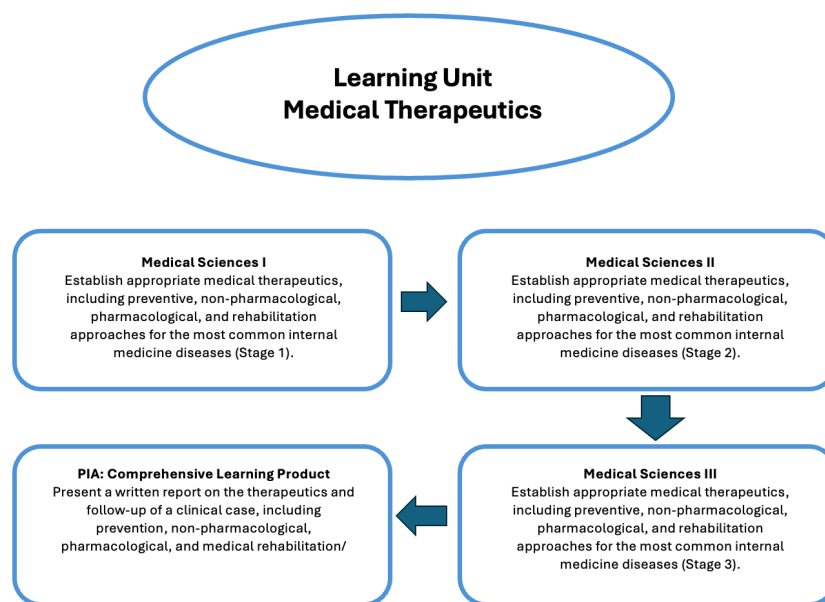
Organizational Work

10.- Promote a culture of organizational work in healthcare by recognizing multidisciplinary collaboration, respecting institutional policies, and adhering to regulations, to contribute to the comprehensive treatment of patients.

Communication

11.- Apply the principles of effective communication to establish respectful and empathetic relationships with patients, their families, the community, and other healthcare professionals, ensuring the appropriate use of information.

5. Graphical Representation



6. Structuring the Learning Unit into Chapters, Stages, or Phases

Stage 1: Medical Therapeutics for Common Diseases in Endocrinology, Gastroenterology, Hematology, and Nutrition

-Competency Elements: Establish medical therapeutics for the most frequent diseases associated with the specialties of Endocrinology, Nutrition, Gastroenterology, and Hematology. This includes preventive, non-pharmacological, pharmacological, and rehabilitative approaches, aiming to ensure accurate treatment at the primary level of clinical care.

Learning Evidence	Performance Criteria	Learning Activities	Content	Resources
Clinical History Report for General Conditions: Endocrinology, Gastroenterology, Hematology, and Nutrition.	<p>Describes the basic medical therapy for the most common diseases in the four mentioned specialties.</p> <p>-Prepares the written report following the guidelines for each specialty studied.</p> <p>-Incorporates the main concepts and ideas of medical therapy for each case discussed.</p> <p>-Expresses their perspective on the analyzed topics.</p> <p>-Completes the required evidence by submitting a bibliography with two recent scientific articles related to the disease in question.</p> <p>-Clearly articulates the application of therapeutic strategies to address the problem/condition.</p> <p>- The proposed therapeutic approach</p>	<p>Course Introduction: Presentation of the methodology and structure of the learning unit, including evaluation criteria and required materials.</p> <p>Students complete pre-class readings on the therapeutic management of diseases listed in the thematic guide published on the Moodle platform.</p> <p>-Facilitators explain, clarify, and exemplify fundamental concepts and principles of therapy for each condition according to the specialty.</p> <p>-Students conduct bibliographic research relevant to the study of each disease.</p> <p>-Facilitators organize virtual interactive sessions for questions, answers, and discussions based on oral presentations.</p> <p>-Facilitators pose clinical questions during sessions and collaboratively analyze the topics or cases presented.</p> <p>-Students individually create conceptual maps during class for major and frequently encountered diseases with similar symptoms.</p> <p>-Students prepare clinical history reports outlining the appropriate medical therapy, duly justified, including summaries with personal conclusions and recent bibliographic references..</p>	<p>1. Conceptual Content GENERAL PRINCIPLES OF MEDICAL THERAPY:</p> <p>1. Preparation of Medical Prescriptions and Doctor-Patient Relationships.</p> <p>- Non-Pharmacological Measures and Treatments.</p> <p>2. Therapeutic concepts for special populations (geriatric, pregnancy, hepatic and renal insufficiency).</p> <p>- Pharmacokinetics and Pharmacodynamics.</p> <p>- Medication Errors.</p> <p>ENDOCRINOLOGY</p> <p>3. Treatment of hyperthyroidism</p> <p>- Treatment of hypothyroidism.</p> <p>4. Management with oral antidiabetics.</p> <p>5. Diabetes management with insulin.</p> <p>NUTRITION</p> <p>6. Pharmacological treatment of obesity and dyslipidemia.</p> <p>HEMATOLOGY</p> <p>7. Treatment of anemia</p> <p>- Management of coagulation disorders</p>	<ul style="list-style-type: none"> • Moodle electronic platform of the Faculty of Medicine: www.medicina.uanl.mx/plataforma. • Microsoft Teams platform. www.office.com • ExamSoft platform for online examinations: ui.examsoft.io • Department webpage www.medicina.uanl.mx/medicinainterna • Official Facebook page: www.facebook.com/medicinainternahu • Classrooms at the Faculty of Medicine and University Hospital. • Auditoriums at the Faculty of Medicine and University Hospital. • Textbooks • Projectors and audiovisual material. • Electronic presentations.

	<p>aligns with the topics studied.</p> <p>-The therapeutic approach is supported by well-founded arguments.</p> <p>-Demonstrates originality in the proposals, as well as in presenting summaries and conclusions for each treatment.</p> <p>-Uses appropriate technical language.</p> <p>-Complies with the required format: Word document, Arial font size 10, single spacing, letter-sized page, 2.5 cm margins, vertical orientation, with proper spelling and grammar.</p> <p>-Submits the report by the specified deadline.</p>		<p>GASTROENTEROLOG</p> <p>Y:</p> <p>9. Treatment of GERD, Non-Ulcer Dyspepsia, and Irritable Bowel Syndrome</p> <p>10. Management of diarrhea, constipation, and intestinal parasitosis.</p> <p>4. DISCUSSION.</p> <p>2. Procedural Content</p> <p>-Describe the medical management of common syndromes in the aforementioned specialties.</p> <p>-Analyze formats for accurately describing the appropriate therapy for each case.</p> <p>-Summarize the characteristics of treatment for the most significant diseases and their variants.</p> <p>-Prioritize syndromes with the greatest public health impact.</p> <p>-Efficiently search for scientific literature related to assigned topics.</p> <p>Attitudinal Content</p> <p>Proper use of technical language.</p> <p>Commitment to academic work.</p> <p>Punctuality in task completion.</p>	
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			Adherence to the regulations of the Faculty of Medicine and the Department of Internal Medicine.	
Stage 2. Medical Therapy for Common Diseases in Cardiology, Geriatrics, Nephrology, Pulmonology, Rheumatology, and Oncology. -Competency Elements: To establish medical therapies for the most frequent diseases related to the specialties of Cardiology, Geriatrics, Nephrology, Pulmonology, Rheumatology, and Oncology, including preventive, non-pharmacological, pharmacological, and rehabilitative approaches, with the goal of providing appropriate treatment at the primary care level.				
Learning Evidence	Performance Criteria	Learning Activities	Content	Resources
<ul style="list-style-type: none"> Clinical Case Report on diseases in Cardiology, Geriatrics, Nephrology, Pulmonology, Rheumatology, and Oncology. 	<p>Accurately describes the basic medical therapy for the most common diseases across the five aforementioned specialties.</p> <p>-Prepares the written report following the specific instructions for each studied specialty. Integrates core concepts and primary ideas of medical therapy in each mentioned case.</p> <p>-Articulates personal perspectives on the analyzed topics. Submits the required evidence with a bibliography citing two recent scientific articles on the respective disease.</p> <p>-Clearly presents the application of the proposed therapy for</p>	<p>Course Introduction: Presentation of the methodology and operation of the learning unit, including evaluation criteria and required materials.</p> <p>-Students will conduct prior readings on the therapies for each disease as outlined in the thematic guide available on the Moodle platform.</p> <p>-Facilitators will explain, clarify, and provide examples of the basic concepts and principles of therapy for each condition according to its specialty.</p> <p>-Students will perform relevant bibliographic research on each disease. Facilitators will host interactive sessions involving questions, answers, and discussions based on their oral presentations.</p> <p>-Facilitators will engage students in clinically-oriented questions during sessions and collaboratively analyze presented topics or cases.</p> <p>-Students will individually create conceptual maps in class about the most</p>	<p>Conceptual Content CARDIOLOGY 11. Treatment of ischemic heart disease. 12. Treatment of hypertension. GERIATRY 13. Inappropriate pharmacological prescriptions in elderly patients. 14. Management of behavioral and psychological syndromes in the elderly. NEFROLOGY 15. Treatment of nephritic and nephrotic syndrome. - Treatment of urinary tract infections. 16. Treatment of nephrolithiasis. - Treatment of diabetic nephropathy.. PULMONOLOGY 17. Treatment of respiratory insufficiency.</p>	<ul style="list-style-type: none"> Moodle platform of the School of Medicine: www.medicina.uanl.mx/plataforma Microsoft Teams platform: www.office.com Examsoft platform for online examinations: ui.examsoft.io Official webpage: www.medicina.uanl.mx/medicinainterna Official Facebook page: www.facebook.com/medicinainternahua Classrooms at the School of Medicine and University Hospital. Auditoriums at the School of Medicine and University Hospital. Hospital consultations and/or internal medicine inpatient areas for practical exercises. Textbooks. Projector and audiovisual materials. Electronic presentations.

	<p>problem/disease resolution.</p> <p>-Aligns proposed therapy with the studied topics.</p> <p>-Provides well-founded arguments for the proposed therapy.</p> <p>-Demonstrates originality in treatment proposals and effectively summarizes and concludes each treatment.</p> <p>-Employs appropriate technical language. Uses the required format: Word document, Arial font size 10, single line spacing, letter-sized page (two pages), 2.5 cm margins, vertical orientation, with correct spelling and grammar verification.</p> <ul style="list-style-type: none"> • - Submits within the established deadline. 	<p>significant and frequent diseases with similar symptoms.</p> <p>-Students will complete clinical case reports with correctly justified medical therapy plans, including a summary with personal conclusions and citations of recent bibliographic references.</p>	<p>- Treatment of respiratory infections.</p> <p>18. Treatment of COPD, asthma, and respiratory symptoms in COVID-19.</p> <p>RHEUMATOLOGY</p> <p>19. General treatment of articular diseases.</p> <p>20. Treatment of fibromyalgia and osteoporosis.</p> <p>- Treatment of metabolic arthritis, hyperuricemia, and gout.</p> <p>ONCOLOGY</p> <p>8. Management of general symptoms in neoplasias (e.g., depression, malnutrition, hyporexia).</p> <p>- Pain management and palliative care for oncological patients.</p> <p>2. Procedural Content.</p> <p>-Describe the medical treatment for the most common syndromes in the specified specialties.</p> <p>-Analyze the appropriate format for describing medical therapies in each case.</p> <p>-Synthesize the main characteristics of the treatment for major diseases and their variants.</p> <p>-Prioritize syndromes with significant public health impacts.</p>	
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			<p>-Efficiently search for scientific literature related to the assigned topics.</p> <p>Attitudinal Content. Proper use of language. Commitment to academic work. Punctuality in task completion. Respect for the rules and regulations of the School of Medicine and the Department of Internal Medicine.</p>	
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Stage 3. Medical Therapy for Common Diseases in Allergy and Clinical Immunology, Dermatology, Infectology, and Neurology

-Competency Elements: To establish medical therapies for the most frequent diseases related to the specialties of Allergy and Clinical Immunology, Dermatology, Infectology, and Neurology, including preventive, non-pharmacological, pharmacological, and rehabilitative approaches, with the goal of providing appropriate treatment at the primary care level.

Learning Evidence	Performance Criteria	Learning Activities	Content	Resources
Clinical Case Report on diseases in Allergy, Dermatology, Infectology, and Neurology.	<p>Accurately describes the basic medical therapy for the most common diseases across the four aforementioned specialties.</p> <p>-Prepares the written report following the specific instructions for each studied specialty.</p> <p>-Integrates core concepts and primary ideas of medical therapy in each mentioned case.</p>	<p>Course Introduction: Presentation of the methodology and operation of the learning unit, including evaluation criteria and required materials.</p> <p>-Students will conduct prior readings on the therapies for each disease as outlined in the thematic guide available on the Moodle platform.</p> <p>-Facilitators will explain, clarify, and provide examples of the basic concepts and principles of therapy for each condition according to its specialty.</p> <p>-Students will perform relevant bibliographic research on each disease. Facilitators will host interactive sessions</p>	<p>Conceptual Content. ALLERGY AND CLINICAL IMMUNOLOGY 21. Tratamiento de Treatment of rhinitis, asthma, and atopic dermatitis. 22. Treatment of urticaria, food allergies, and anaphylactic shock. DERMATOLOGY 23. Treatment of skin infections: bacterial, fungal, viral, and ectoparasitic.</p>	<ul style="list-style-type: none"> Moodle platform of the School of Medicine: www.medicina.uanl.mx/plataforma Microsoft Teams platform: www.office.com Examsoft platform for online examinations: ui.examsoft.io Official webpage: www.medicina.uanl.mx/medicinainterna Official Facebook page: www.facebook.com/medicinainternahua Classrooms at the School of Medicine and University Hospital. Auditoriums at the School of Medicine and University Hospital.

	<p>-Articulates personal perspectives on the analyzed topics.</p> <p>-Submits the required evidence with a bibliography citing two recent scientific articles on the respective disease.</p> <p>-Clearly presents the application of the proposed therapy for problem/disease resolution.</p> <p>-Aligns proposed therapy with the studied topics. Provides well-founded arguments for the proposed therapy.</p> <p>-Demonstrates originality in treatment proposals and effectively summarizes and concludes each treatment.</p> <p>-Employs appropriate technical language.</p> <p>-Uses the required format: Word document, Arial font size 10, single line spacing, letter-sized page (two pages), 2.5 cm margins, vertical orientation, with correct spelling and grammar verification.</p>	<p>involving questions, answers, and discussions based on their oral presentations.</p> <p>-Facilitators will engage students in clinically-oriented questions during sessions and collaboratively analyze presented topics or cases.</p> <p>-Students will individually create conceptual maps in class about the most significant and frequent diseases with similar symptoms.</p> <p>-Students will complete clinical case reports with correctly justified medical therapy plans, including a summary with personal conclusions and citations of recent bibliographic references.</p>	<p>24. Treatment of seborrheic dermatitis, psoriasis, and acne.</p> <p>INFECTOLOGY</p> <p>25. Sexually transmitted infections</p> <p>26. Urinary tract infections</p> <p>27. Therapy in COVID-19.</p> <p>28. Appropriate use of antibiotics</p> <p>NEUROLOGY</p> <p>29. Treatment of vertigo and tinnitus</p> <p>- Management of primary headaches.</p> <p>-Treatment of Parkinson's disease.</p> <p>30. Treatment of neuropathy..</p> <p>-Initial management of epilepsy and status epilepticus.</p> <p>-Treatment of dementias.</p> <p>Procedural Content.</p> <p>-Describe the medical treatment for the most common syndromes in the specified specialties.</p> <p>-Analyze the appropriate format for describing medical therapies in each case.</p> <p>-Synthesize the main characteristics of the treatment for major diseases and their variants.</p>	<ul style="list-style-type: none"> • Hospital consultations and/or internal medicine inpatient areas for practical exercises. • Textbooks. • Projector and audiovisual materials. • Electronic presentations.
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	-Submits within the established deadline.		-Prioritize syndromes with significant public health impacts. -Efficiently search for scientific literature related to the assigned topics.. Attitudinal Content. Proper use of language. Commitment to academic work. Punctuality in task completion. Respect for the rules and regulations of the School of Medicine and the Department of Internal Medicine.	
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7. Comprehensive Evaluation of Processes and Products (Weighting / Summative Evaluation).

Stage 1:

Evidence 1:

Platform activities on conditions related to General Medicine, Endocrinology, Gastroenterology, Hematology, and Nutrition (one activity per specialty).....10 points

Stage 2:

Evidence:

Platform activities on conditions related to Cardiology, Geriatrics, Nephrology, Pulmonology, Rheumatology, and Oncology (one activity per specialty).....12 points

Stage 3:

Evidence:

Platform activities on conditions related to Allergy, Dermatology, Infectology, and Neurology.

(one activity per specialty).....8 points

Final exam66 points

PIA Integrated Learning Product.....4 points

TOTAL.....100 points

Requirements for Passing the Learning Unit To pass this Learning Unit, students must independently pass all learning activities (Platform Activities and the final exam). To earn the PIA points, completing all platform activities is mandatory.

Notes:

Grade Review on Moodle: It is the student's responsibility to review their grades on the Moodle platform, as grades are sent individually. If a grade is missing or unclear, the student must visit the Internal Medicine department within 48 hours after the results are published.

Platform Review and Clarifications: Students have two business days to review and request clarifications after publication, except for the 3rd trimester, where only one day will be allowed due to Extraordinary Exams.

Exam Review and Clarifications: Students can seek clarification during the exam review session. Any doubts should be addressed to the professor responsible for creating the exam. The professor's decision is final, regardless of what the official textbook or videos may state.

Students must adhere to the designated schedule for downloading and submitting the exam on the same day it is administered.

The entire exam process must take place within the assigned auditorium. Students must report their exam submission to the designated supervisor before leaving the auditorium. Failure to do so will result in a grade of NP (Not Presented).

Students must present identification to access the exam. Acceptable forms of identification include a university ID (or badge), voter card, or passport.

Exam seating arrangements and rules will be published on Moodle bulletin boards one day prior to the exam.

It is strictly prohibited to bring any electronic device capable of sending or receiving information into the auditorium. This includes, but is not limited to, phones, smartwatches, headphones, cameras, and other devices not explicitly permitted for use during the exam.

Exams are individual tasks. Any student found sharing, copying, or receiving answers by any means will be committing academic fraud. The exam will be annulled, and sanctions will be applied according to the regulations of the Faculty of Medicine and UANL.

Students must attend at least 80% of all activities to qualify for the exam.

8. Integrated Learning Product for the Learning Unit

Portfolio of Evidence: Includes 15 clinical history reports covering General Topics and the 14 Internal Medicine specialties, submitted via the Moodle platform.

7. Support and Reference Sources (Bibliography, Journals, Electronic Resources).

Bibliography.

- CECIL TEXTBOOK OF MEDICINE, Goldman/Cooney, 27th Edition, 2023. Ed. Elsevier.
- **Consultation Bibliography:**
- Papadakis, McPhee. Current Medical Diagnosis & Treatment. 2020.edición. McGrawHill 2020.
- Bhat, Dretler, Gdowski. Manual Washinton de Terapéutica Médica. 35ª.edición. Wolters Kluwer. 2017, España.
- https://dof.gob.mx/nota_detalle.php?codigo=4864792&fecha=04/02/1998#gsc.tab=0