UANL
UNIVERSIDAD AUTÓNOMA DE NUEVO LEÓN

FACULTAD DE MEDICINA

MODULE DESCRIPTION (ANALYTICAL PROGRAM).

1. Module Information Code:	
• Name of the Institution and School	Universidad Autónoma de Nuevo León, School of Medicine
• Name of the Learning Unit	Pathology
• Total classroom hours for theory and/or practice.	140 hours
• Total extra classroom hours	100 hours
• Course Modality	Schooled
• Type of academic period in which the module is offered	5th Semester
• Type of Learning Unit in the Curriculum	Compulsory
• Curriculum area:	ACFP-F
• UANL credit points	8
• Date of module creation:	October 3, 2014
• Date of last amendment:	January 21, 2021
• Person(s) responsible for the module design and amendments:	Dr. med. Jesús Áncer Rodríguez. Dr. med. Alberto Niderhauser García. Dra. med. Adriana Guadalupe Áncer Arellano. Dra. med. Oralia Barboza Quintana. Dra. med. María de Lourdes Chávez Briones. Dra. med. Raquel Garza Guajardo. Dra. med. Ivett C. Miranda Maldonado

2. Introduction:

The learning unit is structured in 10 stages, starting with generalities of the pathology and its divisions, the relevant data of the changes that occur in the cells by injury and cell death, the inflammatory response to the damage, the immunological alterations, the most frequent infectious processes, the characteristic data of the neoplastic diseases, the most important pathological processes of each one of the systems and organs as well as the neoplastic and pseudoneoplastic processes of the pediatric age; It deals with the knowledge of the diseases, analyzing their clinical picture, their etiology, their mechanisms, morphological changes and their evolution, so that the future professional identifies the main findings of these diseases and relates them to the results of the diagnostic tests that he/she will evaluate in his/her professional performance.

3. Purpose(s)

This learning unit develops the necessary skills to interpret and understand the molecular and morphological changes that take place at the level of cells, tissues, organs and systems in the main pathological entities. It allows the graduate to make clinical diagnoses of the most common diseases at the first level of care and thus solve the main health problems of the community and facilitate the care of the individual with a high moral and ethical sense.

Within the learning units of the curriculum it is related to anatomy, histology, physiology, microbiology, immunology and medical propaedeutics, by identifying the level of biological organization where the disease occurs, as well as the changes that normal structures undergo, when the disease occurs. With respect to Physiology, the relationship derives in the understanding of the physiopathology of the disease; and with Clinical Pathology relating the normal parameters with the mechanisms that lead to the observable effects at cellular, tissue and organic level of the reviewed diseases; as well as with all the learning units of the clinical area.

4. 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.

Personal and social interaction skills

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

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

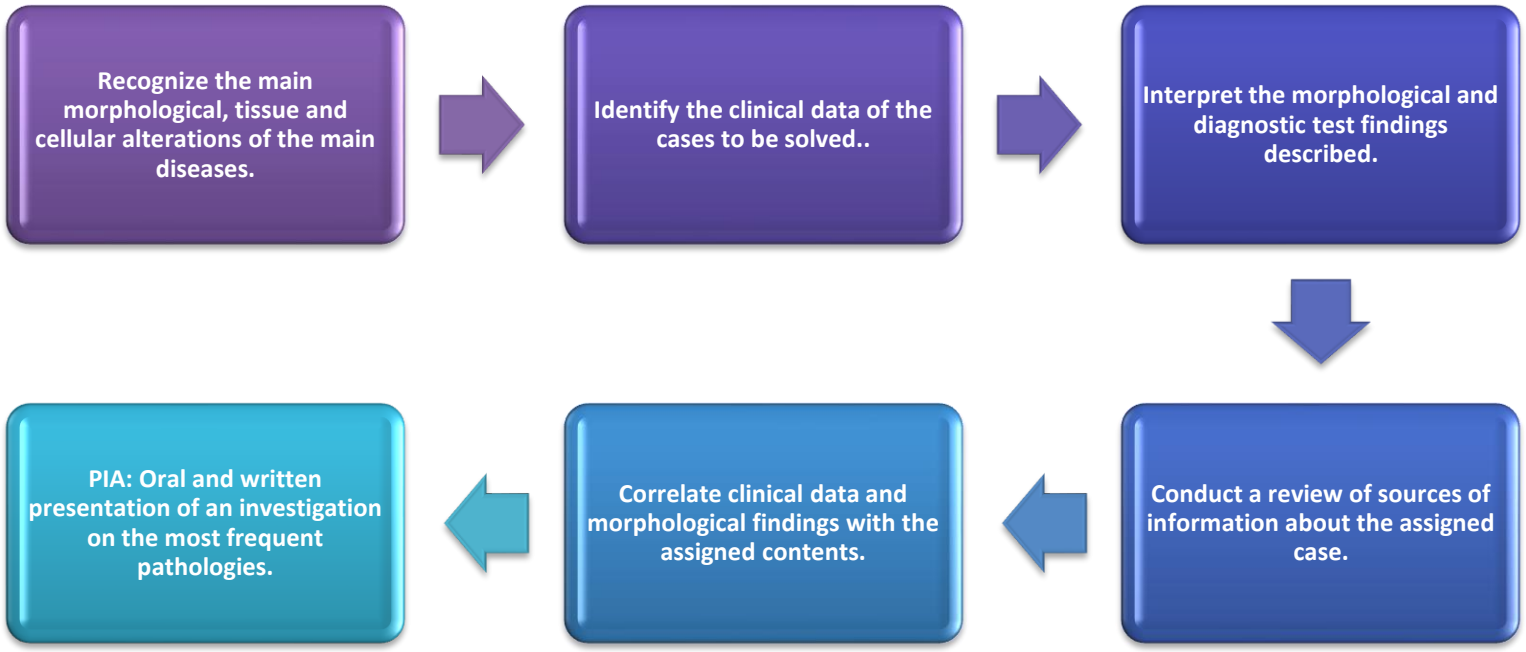
b. Specific competences of the graduate profile that contributes to the learning unit

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

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.

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.

5. Course Roadmap:



6. Structuring into stages or phases

Phase 1: Patología general e Imunopatología.

Component(s) of the competence:

- Apply the basic concepts of pathology and immunopathology through the study of cellular and tissue morphological changes in order to know the alteration associated to diseases.

Evidence of student learning	Performance Criteria	Learning activities	Contents	Resources
Evidence No. 1: Resolution of Pathology, Cellular Pathology, and Immunopathology Cases.	• Identifies the clinical data of the case to be solved. • Interprets the morphological and diagnostic test findings described in the case. • Correlates the clinical data and morphological findings with the assigned contents. • Elaborate in time and form.	**Theory** • Previous reading of the topic. • Presentation of the topic by the professor. • Questioning of the topic to the students and feedback from the professor. • Discussion of the topic with the students. • It takes place in a plenary session. **Practice** • Histological identification of the different organs reviewed during the Workshop. • Interpreting, describing and drawing in the report book the morphological and histopathological	**Conceptual Content** - General Pahology: ○ Injury and cellular death ○ Cellular adaptation, intracelular accumulations and calcifications. ○ Generalities of inflammation ○ Acute, chronic inflammacton and tissue repair - Immune System Pathology: ○ Imunodeficiencies ○ Hypersensitvity, autoimmunity and transplant pathology **Procedural Content** - Identify data and signs of different diseases. - Interpret histopathological slides. - Correlate morphological changes with clinical data. **Attitudinal Content** - Correct handling of laboratory equipment and materials.	• Projector • Power point presentation • Textbooks • Supporting books • Electronic pages • Classroom • Histopathology Laboratories • Self-teaching classroom

		alterations observed in them. • Correlate together with the morphological and clinical alterations the different pathologies which are reviewed in the laboratory.	- Proper use of protective equipment. - Correct use of language. - Relevant presentation for classroom and laboratory work.	

Phase 2: Infectopathology.

Component(s) of the competence:

- Classify the different infectious diseases and etiological agents, through the analysis of clinical data, morphological changes and diagnostic methods for the identification of the most common diseases.

Evidence of student learning	Performance Criteria	Learning activities	Contents	Resources
Evidence No. 2: Case Resolution of Infectious Disease Clinicians.	• Identifies the clinical data of the case to be solved. • Interprets the morphological and diagnostic test findings described in the case. • Correlates the clinical data and morphological findings with the assigned contents. • Elaborate in time and form.	**Theory** • Previous reading of the topic. • Presentation of the topic by the professor. • Questioning of the topic to the students and feedback from the professor. • Discussion of the topic with the students. • It takes place in a plenary session.	**Conceptual Content** - Pathology of the most frequent infectious disease o Generalities o Bacterial o Viral o Mycosis o Parasitosis o Sexually transmitted o Oportunistic **Procedural Content** - Identify data and signs of different diseases. - Interpret histopathological slides. - Correlate morphological changes with clinical data. **Attitudinal Content**	• Projector • Power point presentation • Textbooks • Supporting books • Electronic pages • Classroom • Histopathology Laboratories • Self-teaching classroom

		Practice • Histological identification of the different organs reviewed during the Workshop. • Interpreting, describing and drawing in the report book the morphological and histopathological alterations observed in them. • Correlate together with the morphological and clinical alterations the different pathologies which are reviewed in the laboratory.	- Correct handling of laboratory equipment and materials. - Proper use of protective equipment. - Correct use of language. - Relevant presentation for classroom and laboratory work.	

Phase 3: Neoplastic diseases and lymphomas.				
Component(s) of the competence: • Analyze the basic concepts of neoplastic diseases and lymphomas, considering the origin, clinical characteristics and diagnostic methods in order to identify the most common processes.				
Evidence of student learning	**Performance Criteria**	**Learning activities**	**Contents**	**Resources**
Evidence No. 3: Case resolution for clinicians of neoplastic diseases and lymphomas.	• Identifies the clinical data of the case to be solved. • Interprets the morphological and diagnostic test findings described in the case.	**Theory** • Previous reading of the topic. • Presentation of the topic by the professor.	**Conceptual Content** - Generalities of the Neoplastic Disease ○ Genetic origino f cancer and oncogenes	• Projector • Power point presentation • Textbooks • Supporting books • Electronic pages • Classroom • Histopathology Laboratories

Primera evaluación escrita.	• Correlates the clinical data and morphological findings with the assigned contents. • Elaborate in time and form.	• Questioning of the topic to the students and feedback from the professor. • Discussion of the topic with the students. • It takes place in a plenary session. **Practice** • Histological identification of the different organs reviewed during the Workshop. • Interpreting, describing and drawing in the report book the morphological and histopathological alterations observed in them. • Correlate together with the morphological and clinical alterations the different pathologies which are reviewed in the laboratory.	○ Suppressor genes, repair genes and hereditary cancer syndromes. ○ Carcinogenesis and neoplasia host interactions. - Lynphomas: ○ Hodgkin ○ No Hodgkin **Procedural Content** - Identify data and signs of different diseases. - Interpret histopathological slides. - Correlate morphological changes with clinical data. **Attitudinal Content** - Correct handling of laboratory equipment and materials. - Proper use of protective equipment. - Correct use of language. - Relevant presentation for classroom and laboratory work.	• Self-teaching classroom

Phase 4: Respiratory and cardiovascular pathology.

Component(s) of the competence:

- Classify the different respiratory and cardiovascular diseases, through the analysis of etiopathogenesis, clinical data, morphological changes and diagnostic methods for the identification of the most common diseases.

Evidence of student learning	Performance Criteria	Learning activities	Contents	Resources
Evidence No. 4: Case Resolution for Clinicians of Pulmonary and Cardiovascular Diseases. First evaluation of laboratory practice.	• Identifies the clinical data of the case to be solved. • Interprets the morphological and diagnostic test findings described in the case. • Correlates the clinical data and morphological findings with the assigned contents. • Elaborate in time and form. Identification of the organ. Identification of the process in the cut: -neoplastic. -adaptive. -Infectious. -degenerative. -necrotic.	**Theory** • Previous reading of the topic. • Presentation of the topic by the professor. • Questioning of the topic to the students and feedback from the professor. • Discussion of the topic with the students. • It takes place in a plenary session. **Practice** • Histological identification of the different organs reviewed during the Workshop. • Interpreting, describing and drawing in the report book the	**Conceptual Content** - Pathology of the larynx - Pulmonary and pleural pathology: ○ Chronic Obstructive Pulmonry Disease ○ Inflammatory pahology of the lung and pleura ○ Granulomatous and instertitial lung disease ○ Neoplastic disease of the lung ○ Neoplastic disease of the pleura - Pathology of the mediastinum - Blood vessel pathology - Carciac pathology: Cardiopathies **Procedural Content** - Identify data and signs of different diseases. - Interpret histopathological slides. - Correlate morphological changes with clinical data. **Attitudinal Content** - Correct handling of laboratory equipment and materials. - Proper use of protective equipment. - Correct use of language.	• Projector • Power point presentation • Textbooks • Supporting books • Electronic pages • Classroom • Histopathology Laboratories • Self-teaching classroom

	Histopathological findings characteristic of each injury.	morphological and histopathological alterations observed in them. • Correlate together with the morphological and clinical alterations the different pathologies which are reviewed in the laboratory.	- Relevant presentation for classroom and laboratory work.	

Phase 5: Pathology of salivary glands, digestive tract, bile ducts, liver and exocrine páncreas.

Component(s) of the competence:

- Classify the different diseases of the digestive tract, salivary glands, bile ducts, liver and exocrine pancreas, through the analysis of etiopathogenesis, clinical data, morphological changes and diagnostic methods for the identification of the most common diseases.

Evidence of student learning	Performance Criteria	Learning activities	Contents	Resources
Evidence No.5: Case Resolution for Disease Clinicians of the digestive tract, salivary glands, bile ducts, liver and exocrine pancreas. Second written evaluation.	• Identifies the clinical data of the case to be solved. • Interprets the morphological and diagnostic test findings described in the case. • Correlates the clinical data and morphological findings with the assigned contents. • Elaborate in time and form.	**Theory** • Previous reading of the topic. • Presentation of the topic by the professor. • Questioning of the topic to the students and feedback from the professor. • Discussion of the topic with the students. • It takes place in a plenary session.	**Conceptual Content** - Oral cavity and salivary gland pathology - Digestive tract pathology: o Diseases of the esophagus, stomach, inflammatory bowel disease, vascular and diverticular disease of the intestine. Appendicitis and neoplasms of the intestine - Hepahology: o Hepatitis caused by hepatotropic viroses, drugs and medicine. o Cirrhosis and hepatic carcinoma. - Extra-hepatic bile duct disease. - Inflammarory and neoplastic diseases of the exocrine pancreas. **Procedural Content** - Identify data and signs of different diseases.	• Projector • Power point presentation • Textbooks • Supporting books • Electronic pages • Classroom • Histopathology Laboratories • Self-teaching classroom

		Practice • Histological identification of the different organs reviewed during the Workshop. • Interpreting, describing and drawing in the report book the morphological and histopathological alterations observed in them. • Correlate together with the morphological and clinical alterations the different pathologies which are reviewed in the laboratory.	- Interpret histopathological slides. - Correlate morphological changes with clinical data. **Attitudinal Content** - Correct handling of laboratory equipment and materials. - Proper use of protective equipment. - Correct use of language. - Relevant presentation for classroom and laboratory work.	

Phase 6: Endocrine pathology.

Component(s) of the competence:

- Classify the different endocrine diseases, through the analysis of etiopathogenesis, clinical data, morphological changes and diagnostic methods for the identification of the most common diseases.

Evidence of student learning	Performance Criteria	Learning activities	Contents	Resources
Evidence 6: Case resolution of clinicians of endocrine diseases.	• Identifies the clinical data of the case to be solved. • Interprets the morphological and diagnostic test findings described in the case. • Correlates the clinical data and morphological findings with the assigned contents. • Elaborate in time and form.	**Theory** • Previous reading of the topic. • Presentation of the topic by the professor. • Questioning of the topic to the students and feedback from the professor. • Discussion of the topic with the students. • It takes place in a plenary session. **Practice** • Histological identification of the different organs reviewed during the Workshop. • Interpreting, describing and drawing in the report book the morphological and histopathological alterations observed in them.	**Conceptual Content** - Endocrine pathology: - Pituitary gland - Thyroid gland - Parathyroid glands - Adrenal gland - Endocrine pancreas **Procedural Content** - Identify data and signs of different diseases. - Interpret histopathological slides. - Correlate morphological changes with clinical data. **Attitudinal Content** - Correct handling of laboratory equipment and materials. - Proper use of protective equipment. - Correct use of language. - Relevant presentation for classroom and laboratory work.	• Projector • Power point presentation • Textbooks • Supporting books • Electronic pages • Classroom • Histopathology Laboratories • Self-teaching classroom

		• Correlate together with the morphological and clinical alterations the different pathologies which are reviewed in the laboratory.		

Phase 7: Nephropathology and urinary tract.				
Component(s) of the competence: • Classify the different glomerular, renal and urinary tract diseases, through the analysis of clinical data, morphological changes and diagnostic methods for the identification of the most common diseases.				
Evidence of student learning	**Performance Criteria**	**Learning activities**	**Contents**	**Resources**

Evidence No. 7:
Case resolution for clinicians of glomerular, renal, and urinary tract diseases.
	• Identifies the clinical data of the case to be solved.
	• Interprets the morphological and diagnostic test findings described in the case.
	• Correlates the clinical data and morphological findings with the assigned contents.
	• Elaborate in time and form.
		Theory
		• Previous reading of the topic.
		• Presentation of the topic by the professor.
		• Questioning of the topic to the students and feedback from the professor.
		• Discussion of the topic with the students.
		• It takes place in a plenary session.
		Practice
			Conceptual Content
			- Renal pathology:
			  - Glomerulopathies
			  - Kidney neoplasms
			- Urinary tract pathology
			  - Uro-lithiasis
			  - Infections
			  - Neoplasms
			Procedural Content
			- Identify data and signs of different diseases.
			- Interpret histopathological slides.
			- Correlate morphological changes with clinical data.
			Attitudinal Content
			- Correct handling of laboratory equipment and materials.
				• Projector
				• Power point presentation
				• Textbooks
				• Supporting books
				• Electronic pages
				• Classroom
				• Histopathology Laboratories
				• Self-teaching classroom

		• Histological identification of the different organs reviewed during the Workshop. • Interpreting, describing and drawing in the report book the morphological and histopathological alterations observed in them. • Correlate together with the morphological and clinical alterations the different pathologies which are reviewed in the laboratory.	- Proper use of protective equipment. - Correct use of language. - Relevant presentation for classroom and laboratory work.	

Phase 8: Male and female genitals and mammary gland.				
Component(s) of the competence: • Classify the different diseases of the female and male genital system and the mammary gland, through the analysis of clinical data, morphological changes and diagnostic methods for the identification of the most common diseases.				
Evidence of student learning	**Performance Criteria**	**Learning activities**	**Contents**	**Resources**

Evidence No. 8:
Resolution of clinical cases of diseases of the male and female genital tract and the mammary gland.
	• Identifies the clinical data of the case to be solved.
	• Interprets the morphological and diagnostic test findings described in the case.
	• Correlates the clinical data and morphological
		Theory
		• Previous reading of the topic.
		• Presentation of the topic by the professor.
		• Questioning of the topic to the students and feedback from the professor.
			Conceptual Content
			- Pathology of the male genital system
			  - Prostate pathology
			  - Testicular neoplasms
			- Pathology of the female genital system:
			  - Uterine cervix
			  - Uterine body
			  - Ovary
			  - Pregnancy
			- Mammary gland pathology
			Procedural Content
				• Projector
				• Power point presentation
				• Textbooks
				• Supporting books
				• Electronic pages
				• Classroom
				• Histopathology Laboratories
				• Self-teaching classroom

	findings with the assigned contents. • Elaborate in time and form.	• Discussion of the topic with the students. • It takes place in a plenary session. **Practice** • Histological identification of the different organs reviewed during the Workshop. • Interpreting, describing and drawing in the report book the morphological and histopathological alterations observed in them. • Correlate together with the morphological and clinical alterations the different pathologies which are reviewed in the laboratory.	- Identify data and signs of different diseases. - Interpret histopathological slides. - Correlate morphological changes with clinical data. **Attitudinal Content** - Correct handling of laboratory equipment and materials. - Proper use of protective equipment. - Correct use of language. - Relevant presentation for classroom and laboratory work.	

Phase 9: Pathology of the locomotive system, skin and central nervous system pathology.

Component(s) of the competence:

- Classify the different diseases of the locomotive system, the skin and the central nervous system, through the analysis of clinical data, morphological changes and diagnostic methods for the identification of the most common diseases.

Evidence of student learning	Performance Criteria	Learning activities	Contents	Resources

Evidence No.9:
Clinical case resolution of neoplasms of the locomotor system, skin, and central nervous system.
 	
Second evaluation of laboratory practice.
	• Identifies the clinical data of the case to be solved.
	• Interprets the morphological and diagnostic test findings described in the case.
	• Correlates the clinical data and morphological findings with the assigned contents.
	• Elaborate in time and form.
	
	Identification of the organ.
	
	Identification of the process in the cut:
	-neoplastic.
	-adaptive.
	-Infectious.
	-degenerative.
	-necrotic.
		Theory
		• Previous reading of the topic.
		• Presentation of the topic by the professor.
		• Questioning of the topic to the students and feedback from the professor.
		• Discussion of the topic with the students.
		• It takes place in a plenary session.
		
		Practice
		• Histological identification of the different organs reviewed during the Workshop.
		• Interpreting, describing and drawing in the report book the morphological and histopathological
			Conceptual Content
			• Neoplasms of locomotive system
			• Pre-neoplastic and neoplastic skin disease
			• Central Nervous system pathology
			  • Inflammatory pathology
			  • Vascular Pathology
			  • Neoplastic pathology.
			
			Procedural Content
			- Identify data and signs of different diseases.
			- Interpret histopathological slides.
			- Correlate morphological changes with clinical data.
			
			Attitudinal Content
			- Correct handling of laboratory equipment and materials.
			- Proper use of protective equipment.
			- Correct use of language.
			- Relevant presentation for classroom and laboratory work.
				• Projector
				• Power point presentation
				• Textbooks
				• Supporting books
				• Electronic pages
				• Classroom
				• Histopathology Laboratories
				• Self-teaching classroom

	Histopathological findings characteristic of each injury.	alterations observed in them. • Correlate together with the morphological and clinical alterations the different pathologies which are reviewed in the laboratory.		

Phase 10: Pediatric Pathology.

Component(s) of the competence:

- Classify the different pseudo-neoplasms and benign and malignant neoplasms of the pediatric age, through the analysis of clinical data, morphological changes and diagnostic methods for the identification of the most common diseases.

Evidence of student learning	Performance Criteria	Learning activities	Contents	Resources
Evidence No. 10: Case resolution of clinicians of pseudotumoral and neoplastic lesions of pediatric age.	**Content evidence criteria:** • Identifies the clinical data of the case to be solved. • Interprets the morphological and diagnostic test findings described in the case. • Correlates the clinical data and morphological findings with the assigned contents.	**Theory** • Previous reading of the topic. • Presentation of the topic by the professor. • Questioning of the topic to the students and feedback from the professor. • Discussion of the topic with the students. • It takes place in a plenary session.	**Contenidos Conceptuales** • Pediatric pathology: - Pseudo-tumoral injuries - Benign neoplasm - Malignant neoplasm **Procedural Content** - Identify data and signs of different diseases. - Interpret histopathological slides. - Correlate morphological changes with clinical data. **Attitudinal Content** - Correct handling of laboratory equipment and materials. - Proper use of protective equipment.	• Projector • Power point presentation • Textbooks • Supporting books • Electronic pages • Classroom • Histopathology Laboratories • Self-teaching classroom

Third written evaluation. Final written evaluation.	**Formal evidence criteria:** • Elaborate in time and form.	**Practice** • Histological identification of the different organs reviewed during the Workshop. • Interpreting, describing and drawing in the report book the morphological and histopathological alterations observed in them. • Correlate together with the morphological and clinical alterations the different pathologies which are reviewed in the laboratory.	- Correct use of language. Relevant presentation for classroom and laboratory work.	

7. Summative Evaluation

Evidence No. 1:	Resolution of Pathology, Cellular Pathology and Immunopathology cases.	0.2%
Evidence No. 2:	Resolution of clinical cases of infectious diseases.	0.2%
Evidence No. 3:	Resolution of clinical cases of neoplastic diseases and lymphomas.	0.2%
Evidence No. 4:	Resolution of clinical cases of pulmonary and cardiovascular diseases.	0.2%
Evidence No. 5:	Resolution of clinical cases of diseases of the digestive tract, salivary glands, bile ducts, liver and exocrine pancreas.	0.2%
Evidence No. 6:	Resolution of clinical cases of endocrine diseases.	0.2%
Evidence No. 7:	Resolution of clinical cases of glomerular, renal and urinary tract diseases.	0.2%
Evidence No. 8:	Resolution of clinical cases of diseases of the male and female genital system and the mammary gland.	0.2%
Evidence No. 9:	Resolution of clinical cases of neoplasms of the locomotive system, skin and central nervous system.	0.2%
Evidence No.10:	Resolution of clinical cases of pseudotumoral and neoplastic lesions of pediatric age.	0.2%

First Evaluation	20%
Second Evaluation	20%
Third Evaluation	20%
Fourth Evaluation	25%
First evaluation of laboratory practice	5%
Second evaluation of laboratory practice	5%
CIP	3%
Total	100%

8. Course Integrative Product

Research work on the most frequent pathologies with oral and written presentation.

9. References

Textbooks:

- Kumar V. Abbas A, Aster JC (2015) *Robinsy Cotran Patología Estructural y Funcional*. España: ElsevierSauders.
- Valencia PF, Ancer J y cols. (2013) *Patología*. Mexico: MC Graw Hill Education.
- Rubin E, Gorstein F, Rubin R, Schwarting R, Strayer D (2012) *Patología de Rubin: Fundamentos Clinicopatologicos en Medicina*. España: Lippincott Williams &Wilkins .

Manual de Prácticas de Laboratorio:

- *ManualdePrácticasdeHistopatología.*Departamento de Patología Facultad de Medicina UANL

Links of interest on the Internet. Add page name

- Base de datos: CLINICAL KEY: https://www.clinicalkey.com/
- Base de datos PUBMED: http://www.ncbi.nlm.nih.gov/pubmed
- Pathology outlines.com: http://www.pathologyoutlines.com
- The pathology Guy: http://www.pathguy.com
- PATHMAX: http://www.pathmax.com

APPENDIX.

ASSESSMENT AND WORKLOAD

Module workload		Number of hours	Percentage
Contact hours	Class-based instruction	71h (50.7%)	58.33%= 140 hours
	Laboratory	26h (18.57%)	
	Resolution of clinical cases	10h (7.1%)	
	Exam taking	8h (5.7%)	
	Course integrative product (CIP)	25h (17.8%)	
Independent study	Study	60h (60%)	41.66%= 100 hours
	Exam preparation	40h (40%)	
Total hours of the workload: 30 hours X 8 credits UANL/ECTS*		240h	

*European Credit Transfer and Accumulation System
1 UANL credit = 30 hours

NOTE: Rubrics, checklists and evaluation formats are elaborated by using the performance criteria described in each stage of the module.

SUPLEMENTO COVID-19

Siguiendo las recomendaciones de la Secretaría de Salud del país y la Rectoría de la Universidad, ante la coyuntura de salud COVID-19, la organización de la docencia desde marzo del 2020, seguirá un modelo híbrido, donde la docencia se ajustará a los horarios aprobados por la Secretaría de Salud siguiendo un modelo de Presencialidad / No presencialidad en la medida en que las circunstancias sanitarias y la normativa lo permitan. Los estudiantes asistirán a las clases de manera no presencial mediante la transmisión de las mismas de manera síncrona/asíncrona vía “on line”.