



MODULE DESCRIPTION (ANALYTICAL PROGRAM).

Name of the Institution and School	Universidad Autónoma de Nuevo León,
	School of Medicine.
Name of the Learning Unit	Basic Clinical Integration I
 Total classroom hours for theory and/or practice. 	37 hours
Total extra classroom hours	83 hours
Course Modality	Schooled
Type of academic period in which the module is offered	2nd Semester
Type of Learning Unit in the Curriculum	Compulsory
Curriculum area:	ACFB
UANL credit points	4
Date of module creation:	September 22, 2014
Date of last amendment:	March 20, 2020
Person(s) responsible for the module design and amendments:	Dr. med. Santos Guzmán López / Dr. C. Rodrigo Elizondo Omaña / Dr. Guillermo Jacobo Baca.

2. Introduction:

This Learning Unit is based on the analysis of the different regions of the human body, emphasizing its different organic and tissue components and functions, correlating them with the main clinical entities from a simple and easy to understand perspective for students of the basic area, using the following learning strategies: Active participation in class, discussion of clinical cases and image. It is structured in ten stages where the different regions of the human body are analyzed in a clinical context.

3. Purpose(s)

Establish a correlation between basic concepts and morphological diagnosis through the use of basic and superior intellectual skills of clinical reasoning. Contributes to the graduate's profile by integrating the concepts learned in the basic subjects of medicine to be able to solve health problems at the first level of care. It is related to cellular biology, developmental biology, physiology, semiology and clinical skills, pathology, clinical propaedeutics, imaging, forensic medicine, psychiatry, pediatrics, gynecology, obstetrics, integrating all concepts in order to reach an adequate level of reasoning and solve the main health problems, with which the learning units related to internal medicine and surgery will have the adequate support for their correct understanding. Regarding the specific competencies of the profession, it contributes to the development of autonomous learning, emphasizes the correct use of verbal language, as well as the maintenance of logical and critical thinking, in addition to promoting an attitude of commitment and respect for society, helping the integral formation of a health professional.

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.

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

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.

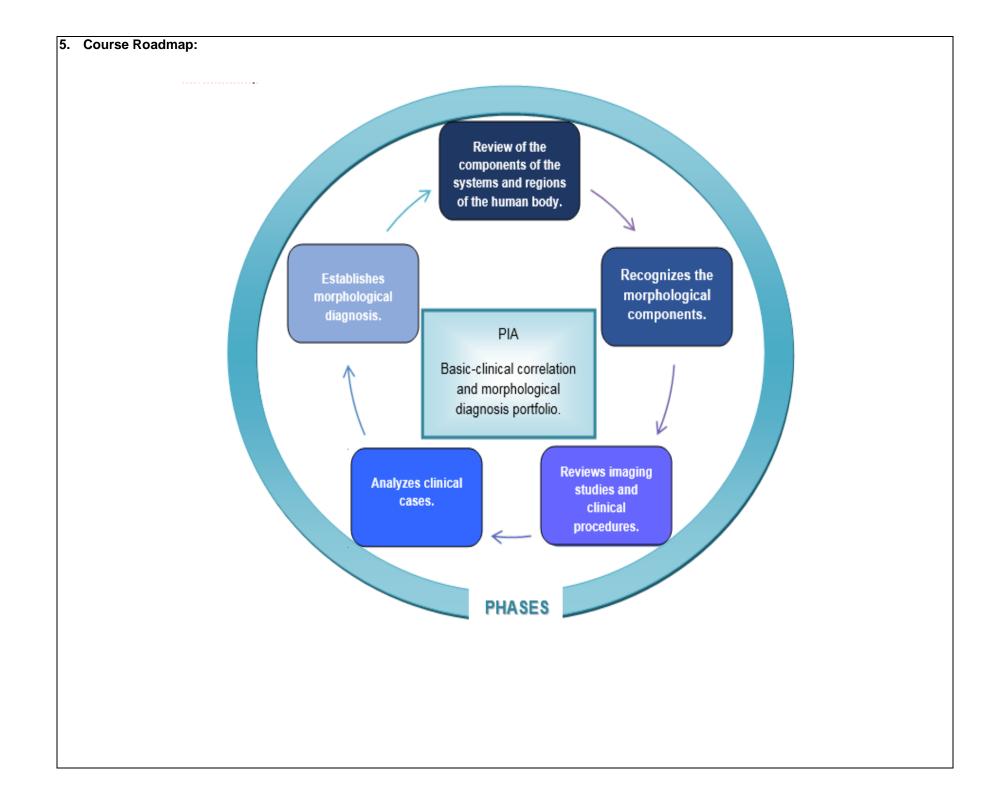
b. Specific competences of the graduate profile that contributes to the learning unit

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.

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.



6. Structuring into stages or phases

Phase 1: Basic concepts of the medical area.

Component(s) of the competence:

Apply the basic concepts of systems and regions by analyzing clinical cases and imaging studies in order to correlate them clinically with the main morphological diagnoses.

Evidence of student learning	Performance Criteria	Learning activities	Contents	Resources
Clinical case discussion laboratory on the identification, description and comparison of components and regions of the human body in imaging studies.	 Demonstrates excellent knowledge of the subject. Correctly uses the terms of position, relationship and movement of the human body, during the presentation of the topic. Correctly identifies the structures presented in the images used in class. Contributes with pertinent and correct comments in the discussion of the topic. Support their arguments during the discussion of the topic. Raises questions that show a deep reflection of the topic. Shows interest and respect for the comments during the discussion. Correctly uses medical terminology. 	 Facilitation activities: Class exposition. Supervising and leading clinical case discussions on the basic concepts of systems and regions. Learning activities: Reading the content related to the clinical case and imaging studies. Elaboration of synoptic tables. Elaboration of summaries on the basic concepts of the systems and regions of the human body. Oral presentation of the components and regions of the human body. Reading report on components and regions of the human body. Completion of the support books. 	 Conceptual Content Anatomy, terms and planes. Musculoskeletal system Cardiovascular and Nervous system. Procedural Content Recognize systems and regions of the human body. Understand the basics of the main imaging studies. Apply the semiology used in the analysis of clinical cases. Attitudinal Content Respect and tolerance to diversity of opinions. 	 Discussion laboratories. Medical School classrooms. Textbooks. Reference books. Audiovisual projection system. Electronic presentations of clinical cases and imaging.
	Correctly uses the terms position, relationship and movement of the			

	human body.			
	 Recognizes and interprets structures in images. 			
Phase 2: Back.				
diagnoses. Evidence of student		ases and imaging studies in or	der to correlate them clinically Contents	with the main morphological
learning		Facilitation activities:		
Clinical case discussion report: Clinical case laboratory about the identification, description and comparison of back components in imaging studies.	 Demonstrates excellent knowledge of the subject. Correctly uses the terms of position, relationship and movement of the human body, during the presentation of the topic. Correctly identifies the structures presented in the images used in class. Contributes with pertinent and correct comments in the discussion of the topic. Support their arguments during the discussion of the topic. Raises questions that show a deep reflection of the topic. Shows interest and respect for the comments during the discussion. 	 Class exposition. Supervision and leading of discussions on clinical morphological cases on the back. Learning activities: Reading content related to the clinical case and imaging studies. Elaboration of synoptic tables, summaries, oral presentations and reading reports on the components of the back. Completion of the activities of the support books. 	 Conceptual Content Dorsal región of the trunk Physical examination of the back. Scoliosis Spina Bifida Osteoporosis Osteoarthritis of the spine. Spondylolisthesis Axis fracture Lumbago Herniated disc Lumbar puncture Meningitis Herpes Zoster Lumbar canal Procedural Content Description of imaging studies. Clinical correlation. Performs morphological diagnosis. Contenido actitudinal. Respect and tolerance to diversity of opinions. 	 Discussion laboratories. Medical school classrooms. Textbooks. Reference books. Audiovisual projection system. Electronic presentations of clinical cases and images. Bones and plastic models.

Written report of imaging studies.	Correctly uses medical terminology.
	 Correctly uses the terms position, relationship and movement of the human body.
	Recognizes and interprets structures in images.

Phase 3: Upper limb

Component(s) of the competence: Analyzes the components of the upper extremity using clinical cases and imaging studies in order to correlate them clinically with the main morphological diagnoses.

Evidence of student learning	Performance Criteria	Learning activities	Contents	Resources
Clinical case discussion report: Clinical case laboratory about the identification, description and comparison of the upper extremity in imaging studies.	 Demonstrates excellent knowledge of the subject. Correctly uses the terms of position, relationship and movement of the human body, during the presentation of the topic. Correctly identifies the structures presented in the images used in class. Contributes with pertinent and correct comments in the discussion of the topic. Support their arguments during the discussion of the topic. Raises questions that show a deep reflection of the topic. 	 Facilitation activities: Class exposition. Supervising and leading discussions on morphological diagnoses involving the components of the upper extremity. Learning activities: Reading content related to the clinical case and imaging studies. Elaboration of synoptic tables, summaries, oral presentations and reading reports on the components of the upper extremity. Completion of the support books. 	 Conceptual Content Upper limb. Physical examination Clavicle fracture Humeral head dislocation Bursitis Rotator cuff injury Brachial plexus injury Erb palsy Pronator syndrome Carpal tunnel syndrome Ulnar nerve injury Radial nerve injury Radus fracture Rheumatoid arthritis Scafoid fracture 5th metacarpal fracture Procedural Content Description of imaging studies. Clinical correlation. Performs morphological diagnosis. 	 Discussion laboratories. Medical school classrooms. Textbooks. Reference books. Audiovisual projection system. Electronic presentations of clinical cases and images.

Written report of imaging studies.	 Shows interest and respect for the comments during the discussion. Correctly uses medical terminology. Correctly uses the terms position, relationship and movement of the human body. Recognizes and interprets structures in images. 		Contenido actitudinal. •Respect and tolerance to diversity of opinions.	
Phase 4: Lower limb				
Component(s) of the comp				
Analyzes the components morphological diagnoses.	of the lower extremity using	g clinical cases and imaging s	tudies in order to correlate th	nem clinically with the main
Evidence of student learning	Performance Criteria	Learning activities	Contents	Resources
Clinical case discussion report: Clinical case laboratory about the identification, description and comparison of the lower	 Demonstrates excellent knowledge of the subject. Correctly uses the terms of position, relationship and 	 Facilitation activities: Class exposition. Supervising and leading discussions on morphological diagnoses involving the 	Conceptual Content •Lower limb • Physical examination • Hip fracture • Hip dislocation • Congenital hip	 Discussion laboratories. Medical school classrooms. Textbooks. Reference books.

	 arguments during the discussion of the topic. Raises questions that show a deep reflection of the topic. Shows interest and respect for the comments during the discussion. 	• Completion of the activities of the support books.	 Procedural Content Description of imaging studies. Clinical correlation. Performs morphological diagnosis. Contenido actitudinal. Respect and tolerance to diversity of opinions. 	
Written report of imaging studies.	 Correctly uses medical terminology. Correctly uses the terms position, relationship and movement of the human body. Recognizes and interprets structures in images. 			
First partil exam.				

Phase 5: Thorax.

Component(s) of the competence: Analyzes the components of the thorax using clinical cases and imaging studies in order to correlate them clinically with the main morphological diagnoses.

Evidence of student learning	Performance Criteria	Learning activities	Contents	Resources
Clinical case discussion report: Clinical case laboratory about identification, description and comparison of the thorax in imaging studies.	 Demonstrates excellent knowledge of the subject. Correctly uses the terms of position, relationship and movement of the human body, during the presentation of the topic. Correctly identifies the structures 	 Facilitation activities: Class exposition. Supervising and leading discussions on morphological diagnoses involving the components of the thorax. Learning activities: Reading content related to the clinical case and imaging studies. 	Conceptual Content •Thoracic region • Physical examination I • Physical examination II • Breast cancer • Fibroadenoma of the breast • Ribr fracture • Pneumothorax • Lung cancer • Bronchogenic cancer • Pulmonary	 Discussion laboratories. Medical school classrooms. Textbooks. Reference books. Audiovisual projection system. Electronic presentations of clinical cases and images.

	 presented in the images used in class. Contributes with pertinent and correct comments in the discussion of the topic. Support their arguments during the discussion of the topic. Raises questions that show a deep reflection of the topic. Shows interest and respect for the comments during the discussion. 	 Elaboration of synoptic tables, summaries, oral presentations and reading reports on the components of the thorax. Completion of the activities of the support books. 	thromboembolism • Ventricular septal defect • Patent ductus arteriosus • Constrictive pericarditis • Acute Infarction • Coronary artery bypass (myocardial revascularization) • Superior vena cava syndrome • Aortic dissection Procedural Content - Description of imaging studies. - Clinical correlation. - Performs morphological diagnosis.	
Written report of imaging studies.	 Correctly uses medical terminology. Correctly uses the terms position, relationship and movement of the human body. Recognizes and interprets structures in images. 		Contenido actitudinal. •Respect and tolerance to diversity of opinions.	

Phase 6: Abdomen.

Component(s) of the competence: Analyzes the components of the abdomen using clinical cases and imaging studies in order to correlate them clinically with the main morphological diagnoses.

Evidence of student learning	Performance Criteria	Learning activities	Contents	Resources
Clinical case discussion report:	Demonstrates excellent knowledge of the subject.	Facilitation activities:Class exposition.	Conceptual Content •Abdomen • Physical examination of	 Discussion laboratories. Medical school
Clinical case laboratory about the identification, description and comparison of the abdomen in imaging	Correctly uses the terms of position, relationship and movement of the	Supervising and leading discussions on morphological diagnoses involving the components of the abdomen.	the abdomen • Inguinal hernia • Peritoneal dialysis • Gastroesofphageal	classrooms.Textbooks.Reference books.Audiovisual

studies.	 human body, during the presentation of the topic. Correctly identifies the structures presented in the images used in class. Contributes with pertinent and correct comments in the discussion of the topic. Support their arguments during the discussion of the topic. Raises questions that show a deep reflection of the topic. Shows interest and respect for the comments during the discussion. 	 Learning activities: Reading content related to the clinical case and imaging studies. Elaboration of synoptic tables, summaries, oral presentations and reading reports on the components of the abdomen. Completion of the support books. 	reflux Duodenal perforation Meckel diverticulum Appendicitis Diverticulosis Colorrectal cancer Splenomegaly Pancreatitis Liver cirrhosis Colecystolithiasis Horseshoe kidney Renal calculi Addison disease Procedural Content Description of imaging studies. Clinical correlation. Performs morphological diagnosis. Contenido actitudinal. Respect and tolerance to diversity of opinions.	 Projection system. Electronic presentations of clinical cases and images.
Written report of imaging studies.	 Correctly uses medical terminology. Correctly uses the terms position, relationship and movement of the human body. Recognizes and interprets structures in images. 			

Phase 7: Pelvis and perineum.

Component(s) of the competence:

Analyzes the components of the pelvis and perineum using clinical cases and imaging studies in order to correlate them clinically with the main morphological diagnoses.

Evidence of student learning	Performance Criteria	Learning activities	Contents	Resources
Clinical case discussion report: Clinical case laboratory about the identification, description and comparison of pelvis and perineum in imaging studies.	 Demonstrates excellent knowledge of the subject. Correctly uses the terms of position, relationship and movement of the human body, during the presentation of the topic. Correctly identifies the structures presented in the images used in class. Contributes with pertinent and correct comments in the discussion of the topic. Support their arguments during the discussion of the topic. Raises questions that show a deep reflection of the topic. Shows interest and respect for the comments during the discussion. 	 Facilitation activities: Class exposition. Supervising and leading discussions on morphological diagnoses involving the components of the pelvis and perineum. Learning activities: Reading content related to the clinical case and imaging studies. Elaboration of synoptic tables, summaries, oral presentations and reading reports on the components of the pelvis and perineum. 	 Conceptual Concent Pelvic and perineal region Phyisical examination pf the pelvis Pregnancy Hysterectomy Ureteral Obstruction Prostate cancer Metastasic prostate cancer Vasectomy Uterine myomatosis Endometriosis Ectopic pregnancy Pelvic floor relaxation Hydrocele Vestibular gland abscess Lower urinary tract infections Procedural Content Description of imaging studies. Clinical correlation. Performs morphological diagnosis. 	 Discussion laboratories. Medical school classrooms. Textbooks. Reference books. Audiovisual projection system. Electronic presentations of clinical cases and images.
Written report of imaging studies.	 Correctly uses medical terminology. Correctly uses the terms position, relationship and movement of the human body. 			

Second partial exam. Phase 8: Neck. Component(s) of the comp Analyzes the components of		ses and imaging studies in orde	er to correlate them clinically	with the main morphological
diagnoses. Evidence of student learning	Performance Criteria	Learning activities	Contents	Resources
Clinical case discussion report: Clinical case laboratory about identifying, describing and comparing the neck in imaging studies.	 Demonstrates excellent knowledge of the subject. Correctly uses the terms of position, relationship and movement of the human body, during the presentation of the topic. Correctly identifies the structures presented in the images used in class. Contributes with pertinent and correct comments in the discussion of the topic. Support their arguments during the discussion of the topic. Raises questions that show a deep reflection of the topic. Shows interest and respect for the comments during the discussion. 	 Facilitation activities: Class exposition. Supervising and leading discussions on morphological diagnoses involving the components of the neck. Learning activities: Reading content related to the clinical case and imaging studies. Elaboration of synoptic tables, summaries, oral presentations and reading reports on the components of the neck. Completion of the support books.	 Conceptual Content Neck region Physical examination of the neck Atlantoaxial subluxation Catheterization of internal jugular vein Torticollis Subclavian puncture Carotid insufficiency Thyroid nodule Dysphonia Direct laringoscopy Cricothyroidotomy Aortic dissection Procedural Content Description of imaging studies. Clinical correlation. Performs morphological diagnosis. Contenido actitudinal. Respect and tolerance to diversity of opinions. 	 Discussion laboratories. Medical school classrooms. Textbooks. Reference books. Audiovisual projection system. Electronic presentations of clinical cases and images. Bones and plastic models.

Written report of imaging studies.	Correctly uses medical terminology.
	 Correctly uses the terms position, relationship and movement of the human body.
	Recognizes and interprets structures in images.

Phase 9: Head.

Component(s) of the competence: Analyzes the components of the head using clinical cases and imaging studies in order to correlate them clinically with the main morphological diagnoses.

Evidence of student learning	Performance Criteria	Learning activities	Contents	Resources
Clinical case discussion report: Clinical case laboratory about the identification, description and comparison of the head in imaging studies.	 Demonstrates excellent knowledge of the subject. Correctly uses the terms of position, relationship and movement of the human body, during the presentation of the topic. Correctly identifies the structures presented in the images used in class. Contributes with pertinent and correct comments in the discussion of the topic. Support their arguments during the discussion of the topic. Raises questions that show a deep reflection of the topic. Shows interest and 	 Facilitation activities: Class exposition. Supervising and leading discussions on morphological diagnoses involving the components of the head. Learning activities: Reading content related to the clinical case and imaging studies. Elaboration of synoptic tables, summaries, oral presentations and reading reports on the components of the head. Completion of the activities of the support books.	 Conceptual Content Head región Physycal examination of the head Cranioencephalic trauma Trigeminal neuralgia Right facial paralysis Herpes Zoster ophtalmicus Carotid-cavernous fistula Cavernous sinus thrombosis Orbital floor fracture Cataract Glaucoma Palatine tonsilitis Dental abscess Nasal fracture Rhinosinusitis Conduction deafness Acute otitis media Acoustic neuroma Jaw fracture Clase II malocclusion 	 Discussion laboratories. Medical school classrooms. Textbooks. Reference books. Audiovisual projection system. Electronic presentations of clinical cases and images. Bones and plastic models.

Written report of imaging studies.	 respect for the comments during the discussion. Correctly uses medical terminology. 	Procedural Content - Description of imaging studies. - Clinical correlation. - Performs morphological diagnosis.
	 Correctly uses the terms position, relationship and movement of the human body. Recognizes and interprets structures in images. 	Contenido actitudinal. •Respect and tolerance to diversity of opinions.

Phase 10: Central nervous system.

Component(s) of the competence: Analyze the components of the central nervous system using clinical cases and imaging studies in order to correlate them clinically with the main morphological diagnoses.

Evidence of student learning	Performance Criteria	Learning activities	Contents	Resources
Clinical case discussion report: Clinical case laboratory about the identification, description and comparison of the central nervous system in imaging studies.	 Demonstrates excellent knowledge of the subject. Correctly uses the terms of position, relationship and movement of the human body, during the presentation of the topic. Correctly identifies the structures presented in the images used in class. Contributes with pertinent and correct comments in the discussion of the topic. Support their arguments during the discussion of the topic. 	 Facilitation activities: Class exposition. Supervising and leading discussions on morphological diagnoses involving the components of the central nervous system. Learning activities: Reading content related to the clinical case and imaging studies. Elaboration of synoptic tables, summaries, oral presentations and reading reports on the components of the central nervous system. Completion of the support books. 	 Conceptual Content Central Nervous System Physical examination of CNS Spinal cord hemisection Physical examination of the cranial nerves Patient with tremor Epidural hematoma Hydrocephalus Meningitis Subarachnoid hemorrhage Multiple sclerosis Syringomyelia Procedural Content Description of imaging studies. Clinical correlation. Performs morphological diagnosis. 	 Discussion laboratories. Medical school classrooms. Textbooks. Reference books. Audiovisual projection system. Electronic presentations of clinical cases and images. Bones and plastic models.

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	 Raises questions that show a deep reflection of the topic. Shows interest and respect for the comments during the discussion. 		Contenido actitudinal. •Respect and tolerance to diversity of opinions.	
Written report of imaging studies.	Correctly uses medical terminology.			
	 Correctly uses the terms position, relationship and movement of the human body. Recognizes and interprets structures in images. 			
Third partial exam.	Ĵ			
Final exam.				
7. Summative Evaluation	n:			
Discussion of clinical cases				10%
Written exercises on the ide	ntification, description and con	nparison of anatomical structure	es in imaging studies	10%
Partial exams	·	·		45%
Final exam				30%
CIP				5%
Total			100%	
8. Course Integrative Pro	oduct:			
	n and morphological diagnosis			
		t on the discussion of clinical es, partial evaluations and final e		dentification, description and
At the end of the learnir of the purpose of this le		tion of the completion of all the	elements of competence that a	allow evaluating the fulfillment

9. References:

Bibliografía:

Drake, R., Vogl, W. & Mitchell, A. (2010). Gray anatomía para estudiantes. Madrid: Elsevier.

Guzmán, S. & Elizondo, R. (2015). Anatomía Humana en Casos Clínicos: Aprendizaje centrado en el razonamiento clínico. México: Panamericana.

Guzmán, S., Elizondo, R. & Bañuelos M. (2015). *Manual para el Laboratorio de Anatomía Humana.* México: Panamericana.

Guzmán, S. (2011). Notas de anatomía para estudiantes. Monterrey, México: Imprenta Universitaria.

Guzmán, S. (2012). Neuroanatomía para estudiantes. Monterrey, México: Imprenta Universitaria.

Moore, K. L. (2013). Anatomía con orientación clínica. Barcelona: Lippincott Williams & Wilkins.

Netter, F. H. (2006). Atlas of Human Anatomy. Madrid: Saunders/Elsevier.

Electronic sources:

Departamento de Anatomía Humana, U.A.N.L.: www.medicina.uanl.mx/anatomia The American Association of Anatomists (AAA): www.anatomy.org

The American Association of Clinical Anatomists (AACA): www.clinicalanatomy.org

The Anatomical Society of Great Britain and Ireland (ASGBI): www.anatsoc.org.uk

Anatomisches Gesellschaft: www.anat.mu-luebeck.de

British Association of Clinical Anatomists (BACA): www.liv.ac.uk/

HumanAnatomy/phd/baca/

European Federation for Experimental Morphology (EFEM): www.unifr.ch/efem/

International Federation of Associations of Anatomists (IFAA): www.ifaa.lsumc.edu

International Society for Plastination: www.kfunigraz.ac.at

Société Suisse d'Anatomie, d'Histologie et d'Embryologie / Schweizerische Ge-

sellschaft für Anatomie, Histologie und Embryologie (SGAHE / SSAHE): www.unifr.ch/sgahe/

APPENDIX.

ASSESSMENT AND WORKLOAD

	Module workload	Number of hours	Percentage	
Contact hours	Discussion of clinical cases	16h (43.24%)	30.83%=	
Contact nours	Written exercises	16h (43.24%)	37	
	Exam taking	4h (10.81%)	horas	
	Course integrative producto (CIP)	1h (2.70%)		
Independent Study		42h (50.60%)	69.16%=	
study	Exam preparation	41h (49.39%)	83 horas	
Total hours of UANL/ECTS*	the workload: 30 hours X 4 credits	120 h	'	

*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".