Course Description Form

1. Course Name: Human Anatomy- Neuroanatomy, Head & Neck Anatomy

2. Course Code: ANT-Ant 22

3. Semester / Year:2nd /2nd

4. Description Preparation Date:

5. Available Attendance Forms: Paper documents, online platform

6. Number of Credit Hours (Total) / Number of Units (Total) 6

7. Course administrator's name (mention all, if more than one name)

Name: Prof. May Fadhil Majid
Email: mayalhabib@nahrainuniv.edu.iq
Professor Dr. Thaer Mahmood Farhan
aljomaili2005@nahrainuniv.edu.iq

8. Course Objectives

Intended - Learning objectives- ILO:

Neuroanatomy: The course is designed to enable the student to

1. Identify the parts and components of CNS on dissections and prosections
2. Realize the basic Knowledge on CNS organization and topography
3. Identify major cortical and subcortical features of the brain and discuss their functional significance, including their involvement in select pathways
4. Highlight the clinical significance of neuroanatomical structure
5. Establish working knowledge of cross sectional anatomy of CNS and relevant applications.
6. Pay attention to orient the medical students for functional neuroanatomy and understand the principles for clinical correlate of neurologic disorders.
7. 7. Apply problem-solving and critical thinking techniques to apply anatomical theory to common clinical scenarios (e.g., lesion localization and associated deficits)
8. Demonstrate professional respect and responsible care of human specimens

Head and neck:

1. Describe the topography of the head and neck
2. Teach the students different anatomical structures and organs with their important relations in head and neck
3. Provide surface markings of anatomical structures on the body wall.

4. Emphasize the clinical significance of anatomical structures and relations facilitating the understanding of a disease process or surgical procedure on anatomical grounds
5. Provide the anatomy essential to understand clinical procedures in the examination of head and neck structures
6. Direct the anatomical knowledge towards the appearance of structures when they are imaged in radiographs
7. Make easier description of the neurovascular anatomy by cadaveric as well as angiographic and imaging methods.
8. Medical students' satisfaction with the course contents and their future career.

9. Teaching and Learning Strategies

Strategy	aljomaili2005@nahrainuniv.edu.iq

10. Course Structure

Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Evaluation method**
1st	9	Teach the anatomy of CNS, learn the clin correlation v anatomical knowledg	1.breifing and orientation for medical students about the neuroanatomy & head and neck course 2. Gross anatomy of brain & medullary centers. 3. Functional localization cerebral cortex I	Lectures+ practical sessio	Exam: formative an summative exams, midterm practical a theoretical exam , fi exam
2nd	9	Teach the anatomy of CNS, learn the clin correlation v anatomical knowledg	4. Functional localization of cerebral cortex II 5. Brain stem I. 6. Brain stem II & retic formation.	Lectures+ practical sessio	Exam: formative summative exa midterm practical theoretical exam , f exam
3rd	9	Teach the anatomy of CNS, learn the clin correlation v anatomical knowledg	7. Meninges. & Ventricles of the brain with clinical correlate 8. Blood supply of the brain. with angiography 9. Limbic system with clinical correlate	Lectures+ practical sessions	Exam: formative summative exa midterm practical theoretical exam , f exam
4th	9	Teach the anatomy of CNS, learn the clin correlation v anatomical knowledg	10. Cerebellum. 11. Diencephalon. 12. Basal ganglia.	Lectures+ practical sessio	Exam: formative summative exa midterm practical theoretical exam , f exam
5th	9	Teach the anatomy of CNS, learn the clin correlation v anatomical knowledg	13. Spinal cord I: gross and sectional anatomy 14. Spinal cord II. Ascending and descending	Lectures+ practical sessio	Exam: formative summative exa midterm practical theoretical exam , f

			pathways 15. The extracranial course of cranial nerves.		exam
6th	9	Teach the anatomy of head & neck, learn clinical correlation v anatomical knowledge	16. Sectional & imaging anatomy of the CNS 17. Surface anatomy, planes and fascia of the neck. 18. Posterior triangle of neck.	Lectures+ practical sessio	Exam: formative summative exa midterm practical theoretical exam , f exam
7th			Midterm exam		
8th			Midterm exam		
9th	9	Teach the anatomy of head & neck, learn clinical correlation v anatomical knowledge	19. Anterior triangle of neck. 20. Thyroid and parathyroid glands. Viscera of neck. 21. Nerves & Blood vessels of the neck.	Lectures+ practical sessio	Exam: formative summative exa midterm practical theoretical exam , f exam
10th	9	Teach the anatomy of head & neck, learn clinical correlation v anatomical knowledge	22. Prevertebral & suboccipital regions. 23. Root of the neck. 24. Clinical anatomy of the pharynx.	Lectures+ practical sessio	Exam: formative summative exa midterm practical theoretical exam , f exam
11th	9	Teach the anatomy of head & neck, learn clinical correlation v anatomical knowledge	25. Clinical anatomy of the larynx. 26. The scalp &muscles of face. 27. Nerves & vessels of face.	Lectures+ practical sessio	Exam: formative summative exa midterm practical theoretical exam , f exam
12th	9	Teach the anatomy of head & neck, learn clinical correlation v anatomical knowledge	28. Parotid region. 29. Infratemporal fossa 30. Ptyregopalatine fossa.	Lectures+ practical sessio	Exam: formative summative exa midterm practical theoretical exam , f exam
13th	9	Teach the anatomy of head & neck, learn clinical correlation v anatomical knowledge	31. Temporomandibular joint & palate. With clinical correlates 32. Mouth &submandibular region. 33. clinical and applied anatomy of the ear	Lectures+ practical sessio	Exam: formative summative exa midterm practical theoretical exam , f exam
14th	9	Teach the anatomy of head & neck, learn clinical correlation v anatomical knowledge	34. The nose & paranasal sinuses. 35. The orbit. & the eyeball 36. Applied anatomy of lymphatic drainage of head & neck	Lectures+ practical sessio	Exam: formative summative exa midterm practical theoretical exam , f exam
15th	9	Teach the anatomy of head & neck, learn clinical correlation v anatomical knowledge	37. Sectional & imaging anatomy of the head & neck 38. Case scenario & problem solving for head and neck anatomy	Lectures+ practical sessio	Exam: formative summative exa midterm practical theoretical exam , f exam

11. Course Evaluation

Theory	15
Practical	10
Assessment	5 quizzes
Total Average	30
Final Theory	50
Final Practical	20
Total Grad	100%

12. Learning and Teaching Resources

- Moore KL & Dalley AF (2022): Clinically Oriented Anatomy. 9th Ed. Lippincott Williams & Wilkins. Philadelphia
- Snell R (2018): Clinical Neuroanatomy. 8th Ed. Lippincott Williams & Wilkins. Philadelphia

Main references (sources)

- Moffatt DB (1993): Lecture notes on anatomy. 2nd ed., Blackwell publications. Oxford
- Snell RS 10th edition (2018): Clinical anatomy for medical students. 6th Ed. Williams & Wilkins. Philadelphia
- Wilkinson: neuroanatomy for medical students
- Barr & Kiernan: the human nervous system

- MRI of the brain and spine (CD)
- McMinn's head and neck anatomy (CD)
- McMinn's color atlas of human anatomy (CD)
- McMinn & Abrahams's clinical atlas of human anatomy (CD)
- Weir J & Abrahams P: Imaging atlas of the human body (CD)
- Netter's Interactive Anatomy (CD)
- Grant's atlas of anatomy (CD)

Course Description Form

13. Course Name: Medical Biology- Cytogenetics

14. Course Code: ANTBio12

15. Semester / Year:1st /2nd

16. Description Preparation Date:

17. Available Attendance Forms: Paper documents, online platform

18. Number of Credit Hours (Total) / Number of Units (Total) 3.5

19. Course administrator's name (mention all, if more than one name)

Name: Prof. May Fadhil Majid
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Professor Dr. Thaer Mahmood Farhan
aljomaili2005@nahrainuniv.edu.iq
Assist. Professor. Shatha Mahmoud Hasan
Shathamahmoud72@nahrainuniv.edu.iq

20. Course Objectives

Intended - Learning objectives- ILO:
The course is designed to enable the student to:
1-understanding the basis of genetics and medical inheritance.
2. study the basic information about the human genome and techniques used in genetic studies of chromosomes
3. understanding how the gene expression
4. study the Genetic diseases and cancer
5-Classification and biological aspects of lower organisms the relation between free-living forms and parasitic forms, and the effects of the environment complement each other in the life of man and other organisms.

21. Teaching and Learning Strategies

Strategy	Shathamahmoud72@nahrainuniv.edu.iq

22. Course Structure

Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Evaluation method**
1st	5	*Introduction cytogenetics *Patterns Chromosome	Cytogenetics" tradition refers to the study chromosomes with the use microscopy Students need to understand	Lectures+ practical sessions	Exam: formative and summative exams, midterm practica theoretical exam , final e

		Inheritance	basic laws of inheritance appreciate how conditions passed on in a family. An		
2nd	5	Chromosomes structure 1& 2	Study chromosomes are thread-like structures in which DNA is tightly packaged within the nucleus. DNA is coiled around proteins called histones, which provide the structural support	Lectures+ practical sessions	Exam: formative and summative exams, midte practical and theoretical , final exam
3rd	5	*Chromosome Inherita abnormalities *Chromosome Inherita abnormalities	Learn the terms used to describe the abnormalities in chromosomal numbers: polyploidy, aneuploidy: trisomy and monosomy, and mosaicism and their causing mechanisms.• Learn the terms that describe the abnormalities in chromosomal structure: deletions, duplications, translocations, and inversions	Lectures+ practical sessions	Exam: formative summative exams, midterm practica theoretical exam , final e
4th	5	*Inheritance of Gen Disorders *Sex-Linked Inheritance	A trait or disorder that is determined by a single gene in an autosome is said to show autosomal inheritance Study Sex-linked inheritance refers to the pattern of inheritance shown by genes that are located on either of the sex chromosomes	Lectures+ practical sessions	Exam: formative summative exams, mi practical and theoretical , final exam
5th	5	*Cell cycle regulationI *Cell cycle regulationII	Describe the internal and external factors that influence the cell cycle control system Explain how the abnormal cell division of cancerous cells escapes normal cell cycle controls	Lectures+ practical sessions	Exam: formative summative exams, midterm practica theoretical exam , final e
6th	5	*DNA Biology(DNAstructure *RNA Structure& Funct	describe the structure of DNA as a polymer composed of many nucleotides joined by phosphodiester bonds forming a sugar-phosphate backbone RNA molecules perform a variety of roles in the cell but are mainly involved in the process of protein	Lectures+ practical sessions	Exam: formative summative exams, midterm practica theoretical exam , final e

			synthesis (translation) and its regulation, and describe the similarities and differences between RNA and DNA		
7th			Midterm exam		
8th			Midterm exam		
9th	5	*DNA Replication *Gene Expression I	Understand the basic mechanism of DNA replication, and know the various enzymes that play a role in this process. This lesson describes the steps involved in a cell as DNA sequence information is read to make RNA and RNA is read to make proteins. A gene will only control a trait in an organism when the gene is expressed	Lectures+ practical sessions	Exam: formative summative exams, mi t practical and theoretical e , final exam
10th	5	**Gene Expression II	Describe the basic mechanics of translation, including the roles of ribosomes, tRNAs, and amino acids.	Lectures+ practical sessions	Exam: formative summative exams, mi t practical and theoretical e , final exam
11th	5	*Mitochondrial DNA *Mitochondrial diseases	Mitochondria are unique organelles carrying their genetic material, independent from that in the nucleus. Describe the etiology, pathogenesis, and clinical features of one type of mitochondrial disease	Lectures+ practical sessions	Exam: formative summative exams, mi t practical and theoretical e , final exam
12th	5	*Cancer (Overview cancer) *Causes and Prevention Cancer	Describe in general terms how cancers develop and be able to describe the hallmarks of cancer. Describe the important genetic/familial syndromes related to cancer development, identify their mode of inheritance and impact on cancer development	Lectures+ practical sessions	Exam: formative summative exams, mi t practical and theoretical e , final exam
13th	5	*Diagnosis of Cancer *Stem cells I	By graduation, medical students should know common presentations of cancer and how to make a diagnosis of cancer In this lesson, students will be able to state where stem cells are	Lectures+ practical sessions	Exam: formative summative exams, mi t practical and theoretical e , final exam

			found, describe the function of stem cells in the human		
14th	5	*Stem cells II Protozoa I *Platyhelminthes I	Study the potential benefits and risks of using stem cells in medicine Study protozoa to provide students with knowledge concerning biological, epidemiological and ecological aspects of parasites causing diseases in humans	Lectures+ practical sessions	Exam: formative summative exams, mi t practical and theoretical e , final exam
15th	5	Overview 1&11			

23. Course Evaluation

Theory	15
Practical	10
Assessment	5 quizzes
Total Average	30
Final Theory	50
Final Practical	20
Total Grad	100%

24. Learning and Teaching Resources

- Molecular biology of the cell, Bruce Albert.2002
- 2-Elements of Medical genetics, Alan E, H. Emery, sixth edition, London 1983
- 3-EMERY'S Elements of Medical Genetics. Peter D. Turnpenny, Sian Ellard,14th EDITION

Course Description Form

25. Course Name: Human Anatomy- Anatomy of Upper & Lower Limbs
26. Course Code: ANT-Ant 12

27. Semester / Year: 2nd / 1st

28. Description Preparation Date: 27/2/2024

29. Available Attendance Forms: Paper documents, online platform

30. Number of Credit Hours (Total) / Number of Units (Total) 6

31. Course administrator's name (mention all, if more than one name)

Name:
Prof. Dr. Haider Abdulrassoul Jaffar
Lecturer Dr. Hussein Abbas Jarullah

32. Course Objectives

Intended - Learning objectives- ILO:
The course is designed to enable the student to:
1**.** Describe the topography of the upper and lower limbs
2. Identify the surface markings of limb structures on the body wall emphasizing peripheral pulses and palpable bony landmarks
3. Direct the anatomical knowledge towards the appearance of structures when they are imaged in radiographs.
4. Emphasize the clinical significance of anatomical structures and relations facilitating the understanding of a disease process or surgical procedure on anatomical grounds

33. Teaching and Learning Strategies

Strategy

Teaching and learning of human upper & lower limbs anatomy includes the following methods:

1. Theory:

- Give theory background interactive lectures attending physically in the lectures-halls three lectures per week on two repetition,
- Do some formative quizzes at the end of the lectures for feedback knowledge
- Using Al-Nahrain medical college platform is one of the methods used to communicate with student at home and use this classroom to give the headlines for the next coming lectures, inform them about upcoming quizzes in addition to performing home formative quizzes and assignments
- Physically attending Formative assessment and exam

2. Practical sessions and training:

	• Demonstration of the real cadaveric dissection • Plastic models demonstration • Live-camera anatomy demonstration using [modified closed- circuit audiovisual learning system] • Virtual anatomy lab. Teaching [virtual anatomy tables] these are synchronized with master table in the lab. That controls what are being displaced on the virtual tables and LCD screens in the anatomy lab. • Students are subdivided into 4 groups [A, B, C, D] in the lab., each group is composed of around (80-90) students who are allowed to use all the tools and facilities in the anatomy lab., as well as the virtual anatomy lab through-out 3 hrs. on two occasions per week [practical anatomy lab. Sessions] • Clinically oriented practical anatomy teaching for students to be able to correlate the basic anatomical knowledge with the clinically based scenarios provided in practical exams.

34. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1st	9	Teach the anatomy of the U limb, learn the clinical correl with anatomical knowledge	1. Osteology of the upper li 2. Superficial structures of upper limb 3. Anterior and post. thora appendicular muscle	Lectures+ practical sessio	Exam: formative and summative exams, midterm practical an theoretical exam , fi exam
2nd	9	Teach the anatomy of the U limb, learn the clinical correl with anatomical knowledge	4. Joints of the pectoral region and scapulohumeral muscles 5. The shoulder joint, functional and clinical anatomy 6. The axilla: boundaries and axillary vessels and lymph nodes. Clinical correlates	Lectures+ practical sessio	Exam: formative summative exa midterm practical theoretical exam , f exam
3rd	9	Teach the anatomy of the U limb, learn the clinical correl with anatomical knowledge	7. The brachial plexus 8. The arm: anterior & post. Compartment. Clinical anatomy 9. The cubital fossa and elbow joint. Applied anatomy of cubital	Lectures+ practical sessions	Exam: formative summative exa midterm practical theoretical exam , f exam

			fossa		
4th	9	Teach the anatomy of the U limb, learn the clinical correl with anatomical knowledge	10. Flexor compartment of the forearm 11. Extensor compartment of the forearm 12. Nerves and vessels of the forearm. The radio-ulnar joints	Lectures+ practical sessio	Exam: formative summative exa midterm practical theoretical exam , f exam
5th	9	Teach the anatomy of the U limb, learn the clinical correl with anatomical knowledge	13. Clinical anatomy of fractures of radius & ulna 14. The wrist region and the Hand (muscles) 15. The Hand (blood vessels and nerves)	Lectures+ practical sessio	Exam: formative summative exa midterm practical theoretical exam , f exam
6th	9	Teach the anatomy of the U limb, learn the clinical correl with anatomical knowledge	16. Applied anatomy of wrist and hand 17. Nerve injuries of upper limbs 18. Imaging and cross sectional anatomy of upper limb	Lectures+ practical sessio	Exam: formative summative exa midterm practical theoretical exam , f exam
7th		Teach the anatomy of the U limb, learn the clinical correl with anatomical knowledge	MID-TERM EXAMINATION		
8th		Teach the anatomy of the L limb, learn the clinical correl with anatomical knowledge	1. Osteology of the lower limb 2. Superficial thigh structures & Applied anatomy 3. The femoral triangle, Femoral sheath, the anterior and adductor compartment. Adductor canal		
9th	9	Teach the anatomy of the L limb, learn the clinical correl with anatomical knowledge	4. Gluteal region; anatomy and its clinical correlate 5. The hip joint; anatomy and main clinical conditions related 6. Posterior	Lectures+ practical sessio	Exam: formative summative exa midterm practical theoretical exam , f exam

			compartment of the thigh		
10th	9	Teach the anatomy of the L limb, learn the clinical correl with anatomical knowledge	7. Clinical anatomy of fractures of femur 8. Popliteal fossa; anatomy and applied anatomy 9. The knee joint; anatomy and main clinical conditions related	Lectures+ practical sessio	Exam: formative summative exa midterm practical theoretical exam , f exam
11th	9	Teach the anatomy of the L limb, learn the clinical correl with anatomical knowledge	10. Posterior crural compartment 11. The sole of the foot 12. The ankle joint and joints of the foot	Lectures+ practical sessio	Exam: formative summative exa midterm practical theoretical exam , f exam
12th	9	Teach the anatomy of the L limb, learn the clinical correl with anatomical knowledge	13. Arches of the foot; anatomy and clinical significance 14. Posture and gait 15. Venous drainage of the lower limb & varicose veins	Lectures+ practical sessio	Exam: formative summative exa midterm practical theoretical exam , f exam
13th	9	Teach the anatomy of the L limb, learn the clinical correl with anatomical knowledge	16. Nerve injuries in the lower limb 17. Imaging and cross sectional anatomy of the lower limb 18. Applied anatomy of lower limb (cutaneous nerves 19. and peripheral pulses)	Lectures+ practical sessio	Exam: formative summative exa midterm practical theoretical exam , f exam
14th	9	Teach the anatomy of the L limb, learn the clinical correl with anatomical knowledge	How to analyse clinical Scenarios based on anatomical knowledge. Examples and discussion	Lectures+ practical sessio	Exam: formative summative exa midterm practical theoretical exam , f exam
15th	9	Teach the anatomy of the L limb, learn the clinical correl with anatomical knowledge	Overview	Lectures+ practical sessio	Exam: formative summative exa midterm practical theoretical exam , f exam

19. Course Evaluation

Theory	15
Practical	10
Assessment	5 quizzes
Total Average	30
Final Theory	50
Final Practical	20
Total Grad	100%

20. Learning and Teaching Resources

- Moore KL & Dalley AF (2022): Clinically Oriented Anatomy. 9th Ed. Lippincott Williams & Wilkins. Philadelphia
- Snell R (2018): Clinical Neuroanatomy. 8th Ed. Lippincott Williams & Wilkins. Philadelphia

Main references (sources)

- Moffatt DB (1993): Lecture notes on anatomy. 2nd ed., Blackwell publications. Oxford
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- Wilkinson: neuroanatomy for medical students
- Barr & Kiernan: the human nervous system

- MRI of the brain and spine (CD)
- McMinn's head and neck anatomy (CD)
- McMinn's color atlas of human anatomy (CD)
- McMinn & Abrahams's clinical atlas of human anatomy (CD)
- Weir J & Abrahams P: Imaging atlas of the human body (CD)
- Netter's Interactive Anatomy (CD)
- Grant's atlas of anatomy (CD)

Course Description Form

35. Course Name: Embryology- systems-Based Embryolog

36. Course Code: ANTEmb-21

37. Semester / Year: 2nd semester/2nd year

38. Description Preparation Date:

39. Available Attendance Forms: Attendance only

40. Number of Credit Hours (Total) / Number of Units (Total) 2

41. Course administrator's name (mention all, if more than one name)

Name: Name: Prof. May Fadhil Majid
Email: mayalhabib@nahrainuniv.edu.iq
Professor Dr. Thaer Mahmood Farhan
Email: aljomaili2005@nahrainuniv.edu.iq

42. Course Objectives

Course Objectives

- Study the morphogenetic changes related to organs formation.
- Understanding the embryological aspects of congenital malformations
- Understanding the clinical varieties of the most Common applied embryological presentations related to systemic embryology

43. Teaching and Learning Strategies

Strategy	

44. Course Structure

Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Evaluation method**
1st	3	Teach morphogenetic changes related musculoskeletal organs formation	Embryology of musculoskeletal system (Somitogenesis & Myogenesis).	Lectures+ practical sessi	Exam: formative summative exa midterm practical theoretical exam , f exam
2nd	3	Teach morphogenetic changes related skeletal org formation learn clinical correla with embryolog knowledge	Development of t skeletal system: (the skull, limbs, vertebrae, rib and sternum)	Lectures+ practical sessi	Exam: formative summative exa midterm practical theoretical exam , f exam

3rd	3	Teach morphogenetic changes related oud system org formation, learn clinical correla with embryolog knowledge	Development of t central nervous system	Lectures+ practical sessi	Exam: formative summative exa midterm practical theoretical exam , f exam
4th	3	Teach morphogenetic changes related head & n organs format learn the clin correlation v embryological knowledge	Development of t head and neck	Lectures+ practical sessi	Exam: formative summative exa midterm practical theoretical exam , f exam
5th	3	Teach morphogenetic changes related eye & ear org formation, learn clinical correla with embryolog knowledge	Formation of the eye and ear.	Lectures+ practical sessi	Exam: formative and summative exams, midterm practical and theoretical exam , final exam
6th	3	Teach morphogenetic changes related cardiac sys organs format learn the clin correlation v embryological knowledge	Morphogenesis o the cardiac system I	Lectures+ practical sessi	Exam: formative summative exa midterm practical theoretical exam , f exam
7th	3		Midterm exam		
8th	3		Midterm exam		
9th	3	Teach morphogenetic changes related cardiac sys organs format learn the clin correlation v embryological knowledge	Morphogenesis o the cardiac system II	Lectures+ practical sessi	Exam: formative summative exa midterm practical theoretical exam , f exam
10th	3	Teach morphogenetic changes related vascular org formation, learn clinical correla with embryolog knowledge	Development of t vascular system	Lectures+ practical sessi	Exam: formative summative exa midterm practical theoretical exam , f exam
11th	3	Teach morphogenetic	Embryogenesis o	Lectures+ practical sessi	Exam: formative

		changes related gut tube org formation, learn clinical correla with embryolog knowledge	gut tube diverticulum.		and summative exams, midterm practical and theoretical exam , final exam
12th	3	Teach morphogenetic changes related renal org formation, learn clinical correla with embryolog knowledge	Embryogenesis o the Urogenital system: renal system	Lectures+ practical sessi	Exam: formative summative exa midterm practical theoretical exam , f exam
13th		Teach morphogenetic changes related internal ge organs format learn the clin correlation v embryological knowledge	Developmental o the internal genital organs	Lectures+ practical sessi	Exam: formative summative exa midterm practical theoretical exam , f exam
14th		Teach the morphogenetic changes related external genital organs formatio learn the clinica correlation with embryological knowledge	Development of t external genital organs	Lectures+ practical sessi	Exam: formative summative exa midterm practical theoretical exam , f exam
15th			Over view of systemic embryology.	Lectures+ practical sessi	Exam: formative summative exa midterm practical theoretical exam , f exam.

45. Course Evaluation

Theory	15
Practical	10
Assessment	5 quizzes
Total Average	30
Final Theory	50
Final Practical	20
Total Grad	100%

46. Learning and Teaching Resources
- Sadler TW (2014): Langman's medical embryology. 13thEd.William& Wilkins. Philadelphia. - Moore KL and Persaud TVN (1998): Before we are born, Essentials of embryology and birth defects. 5th Ed. Saunders' comp. Philadelphia. - Moore KL and Persaud TVN (1998): The developing human, clinical oriented embryology. 6th Ed. Saunders' comp. Philadelphia.
Main references (sources)
Many soft wares and websites

Program Description/ Anatomy Department

Program description				
Year/ level	Course code	Course title	Course credit	
			theoretical	praactical
2023/2024 1st	NM01-ANTBio-11	Medical Biology	3	3
2023/2024 1st	NM01-ANTAnt-12	Human Anatomy	3	6
2023/2024 1st	NM01-ANTBio-12	Medical Biology	2	3
2023/2024 2ed	NM02-ANTAnt-21	Human Anatomy	3	6
2023/2024 2ed	NM02-ANTHis-21	Histology	2	2
2023/2024 2ed	NM02-ANTEmb-21	Emberiology	1	2
2023/2024 2ed	NM02-ANTAnt-22	Human Anatomy	3	6
2023/2024 2ed	NM02-ANTHis-22	Histology	2	2
2023/2024 2ed	NM02-ANTEmb-22	Emberiology	1	2
2023/2024 2ed	NM01-ANTBio-11	Medical Biology	3	3
2023/2024 2ed	NM01-ANTAnt-12	Human anatomy	3	6

Program Skill Outline/ Anatomy Department

Program Skills Outline																
				Required program Learning outcomes												
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics				
				A1	A2	A3	A 4	B1	B2	B 3	B4	C1	C2	C3		C4
2nd	NM02-ANTEmb-21	Embryology	Basic	X	X	X	X			X	X	X	X		X	
2nd	NM02-ANTAnt-22	Human Anatomy	basic	X	X	X	X			X	X	X	X		X	
1st	NM01-ANTBio-12	Medical Biology	basic	x	x	x	X			X	X	X	X		X	
1st	NM01-ANTAnt-12	Human Anatomy	basic	X	X	X		X	X							