Mansoura University
Faculty of Medicine

Log Book

Anatomy Department

2016 - 2017

ختم القسم

إيصال تسليم Log Book

اسم الطالب : .....

الفرقة : .....

رقم الجلوس : .....

تاريخ التسليم : .....

توقيع المستلم : .....

رسالــة الكلــية

"تقديم مستوى عال التميز فى التعليم والتدريب الطبى
وتقديم خدمات صحية متميزة للمجتمع
عن طريق المراكز الطبية المتخصصة
وكذلك الإرتقاء بالبحث العلمى"

رؤيــة الكلــية

"أن نصنف إقليميا ونحقق التميز فى التعليم الطبى
والبحوث وخدمة المجتمع"

Course Specification 2015/2016

For the Anatomy (Second year)

Faculty : Medicine
Department : Anatomy and Embryology Department

Course Specification:

Programme (s) on which the course is given : M.B.B.Ch program
Department offering the course : Anatomy and Embryology
Academic year / level : 2nd year
Date of specification approval : 29/12/2015

A- Basic information:

Title: Medical Physiology Code: ANT.2
Lecture: 120 Tutorial: Practical 120 Total: 240

B- Professional Information:

1 - Overall Aims of Course

The overall aim of the course is to provide the students with the basic anatomical knowledge of the normal structure of the human body at the level of organs and systems of the head and neck, lower limb, brain & spinal cord and normal and abnormal growth and development of the different organs and systems and acquire the skill of correlating the anatomical facts with expected clinical problems.

2 – Intended Learning Outcomes of Course (ILOs)

A - Knowledge and Understanding:

By the end of the course, students should be able to:

A 1. Describe the basic anatomical structure of the head, neck, lower limb, brain and spinal cord.
A 2. Recognize the surface landmarks of the underlying bones, muscles and tendons, and internal structures (main nerves, vessels and viscera) for head, neck and lower limb.
A 3. List the different branches of nerves and vessels of head, neck and lower limb.
A 4. Recall the actions of the different muscles of head, neck and lower limb.
A 5. Recognize the movements of the TMJ & different joints of the lower limb and the muscles involved in each movement.
A 6. Outline the major clinical applications of anatomical facts.
A 7. List clinical signs of nerve injuries and of brain or spinal cord damage based on their normal anatomy.
A 8. Discuss of the different neuroanatomical syndromes.
A 9. Explain the different stages of development of different organs and systems as well as errors in development.
A 10. Explain the anatomical facts based on their development.
A 11. Explain the causes of the congenital anomalies

B- Intellectual Skills:

By the end of the course, students should be able to:

B 1. Integrate the anatomical facts while examining the living subject in order to reach a proper diagnosis.
B 2. Relate the surface markings of different structures with the position or course of internal

structures of head, neck, lower limb and spinal cord

B 3. Assemble the different internal structures of head, neck, lower limb, brain and spinal cord in cadavers and preserved specimens.

B 4. Correlate the anatomical knowledge with clinical signs seen in cases of nerve injuries and CNS lesions.

B 5. Integrate his knowledge of neuroanatomy with those of neurophysiology and neurohistology.

B 6. Correlate his knowledge in embryology with clinical findings caused by errors in development.

P-Professional and Practical Skills:

By the end of the course, students should be able to:

C1. Design an anatomical model for different areas of the brain.

C2. Draw diagrams for vessels and nerves of upper limb, head and neck and for different sections of the brain and spinal cord and for vessels and nerves in the regions of the study.

C3. Elicit the normal anatomical structures on radiographs, ultrasonography, C.T. scan and nuclear magnetic resonance images.

T- General and Transferable Skills:

By the end of the course, students should be able to:

D1 Plan and work as a team.

D2 Use internet and learn searching skills.

D3 Recognize the scope and limits of their role as students and the necessity to collaborate with others

D4 Maintain a professional image concerning behavior, dress and speech.

3 – Contents:

Topics	Number of hours	lectures	Practical
1.Head and Neck: 1. SCALP (layers, blood supply, nerve supply and lymphatic drainage)	**2**	**1**	**1**
2. Face (muscles, nerve supply , blood supply and lymphatic drainage)	**3**	**1**	**2**
3. Posterior triangle (boundaries and contents).	**2**	**1**	**1**
4. Cranial cavity (Dural folds and sinuses).	**4**	**2**	**2**
5. Orbit (boundaries and contents).	**5**	**2**	**3**
6. Anterior triangle (boundaries and contents).	**4**	**2**	**2**
7.Submandibular region (gland and lymph nodes).	**6**	**2**	**4**
8. Parotid region (extent, capsule, features, relations, structure within the gland, parotid duct, nerve supply and surface anatomy)	**4**	**2**	**2**
9. Infratemporal fossa (muscles of mastication, mandibular nerve, maxillary nerve, sphenopalatine ganglion, otic ganglion and maxillary artery).	**10**	**4**	**6**
10. Thyroid gland (shape, capsule, features, relations, nerve supply, blood supply, lymphatic drainage and applied anatomy).	**5**	**2**	**3**
11. Pharynx (muscles, sagittal section and palatine tonsil).	**10**	**4**	**6**

12. Nose (lateral wall, arterial, nerve and lymphatic).	**9**	**3**	**6**
13. Larynx (cartilage, ligaments and muscles).	**10**	**4**	**6**
14. Mouth cavity (tongue muscles, blood supply, nerve and lymphatic).	**6**	**2**	**4**
15. Cranial nerves (7^{th}, 9^{th}, $10^{th,\ 11th}$ and 12^{th}).	**16**	**8**	**8**
2.Neuroanatomy: 1. Development of the nervous system and congenital anomalies.	**2**	**1**	**1**
2. Medulla, Pons and Midbrain (ventral and dorsal surface).	**2**	**1**	**1**
3. Fourth ventricle (boundaries, foramina, communications, cranial nerve nuclei in its floor and choroid plexus) and cerebellum (features, subdivisions and arterial supply).	**4**	**2**	**2**
4. Vertebrobasilar system& circle of Willis (site, formation, anatomical and clinical importance).	**3**	**1**	**2**
5. Diencephalon (boundaries, divisions and arterial supply) and third ventricle (boundaries, recesses, communications, choroid plexus)	**4**	**2**	**2**
6. Arterial supply of the brain (internal carotid artery, anterior cerebral artery, middle cerebral artery and posterior cerebral artery	**4**	**1**	**3**
7. Venous drainage (superior cerebral veins and deep cerebral veins, and CSF (volume, composition, circulation, formation, absorption, function and clinical notes).	**3**	**1**	**2**
8. Brainstem: internal structure	**4**	**2**	**2**
9. Cerebellar connections	**4**	**2**	**2**
10. Thalamus (boundaries, classification of thalamic nuclei, connection of thalamic nuclei, arterial supply and thalamic nuclei) Internal capsule	**4**	**2**	**2**
11. Cerebral hemisphere (sulci, gyri and higher brain functions)	**4**	**2**	**2**
12. Basal ganglia & lateral ventricle (boundaries, connections, foramina and choroid plexus).	**4**	**2**	**2**
13. Nerve fibers in CNS and the limbic system (component and function).	**3**	**1**	**2**
14. Spinal cord: anatomical organization of ascending tracts (gracile and cuneate tract, ventral and spinocerebral tract, lateral spinothalamic tract, ventral spinothalamic tract and liss auer's).	**4**	**2**	**2**
15. Trigeminal system (sensation from the face and trigeminal plexus).	**2**	**1**	**1**
16. Motor systems & descending tracts (lateral and ventral corticospinal tracts, rubrospinal and tectospinal tract, lateral and medial vestibulospinal tract, pontine and medullary reticulospinal tracts, raphe spinal and	**4**	**2**	**2**

descending autonomic fibers).			
3.Lower limb: 1. Bones of Lower limb (hip bone, femur, tibia, fibula and foot).	**3**	**1**	**2**
2. Front of the thigh (fascia, muscles, vessels and nerves).	**8**	**4**	**4**
3.Medial aspect of the thigh (muscles, vessels and nerves)	**8**	**2**	**6**
4. Gluteal region (muscles, vessels and nerves).	**4**	**2**	**2**
5. Popliteal fossa (bounderies and contents).	**2**	**1**	**1**
6.Back of the thigh (muscles, vessels and nerves)	**10**	**4**	**6**
7.Anterior compartment of the leg (muscles, vessels and nerves)	**5**	**1**	**4**
8. Dorsum of the foot (muscles, vessels and nerves).	**4**	**2**	**2**
9. Back of the leg (muscles, vessels and nerves).	**4**	**2**	**2**
10. Sole of the foot (layers, muscles, vessels and nerves).	**3**	**2**	**1**
11. Joints of lower limb (type, components, ligaments, relations, movement, nerve and blood supply of hip, knee, ankle and foot joints).	**8**	**4**	**4**
4.Embryology: 1. Cardiovascular system (development and congenital anomalies).	**4**	**4**	**-**
2. Development of Vertebral column and anomalies.	**1**	**1**	**-**
3. Development of Limbs and congenital anomalies.	**1**	**1**	**-**
4. Development of spinal cord and anomalies.	**1**	**1**	**-**
5. Genital system (development and anomalies).	**2**	**2**	**-**
6. Urinary system (development and anomalies).	**3**	**3**	**-**
7.Branchial arches (derivatives and anomalies).	**7**	**7**	**-**
8.Tongue (development and anomalies).	**2**	**2**	**-**
9.Thyroid gland (development and anomalies).	**2**	**2**	**-**
10.Development of mouth cavity and its anomalies	**2**	**2**	**-**
11.Face (development and anomalies).	**1**	**1**	**-**
12.Palate (development and anomalies).	**2**	**2**	**-**
13.Respiratory system (development and anomalies).	**2**	**2**	**-**
TOTAL	**240**	**120**	**120**

Content ILOs Matrix:

	A											B						C			D			
	1	2	3	4	5	6	7	8	9	10	11	1	2	3	4	5	6	1	2	3	1	2	3	4
Head and neck	●	●	●	●	●	●						●	●	●					●	●	●	●	●	●
Neuro-anatomy	●					●	●	●				●	●	●	●	●		●	●	●	●	●	●	●
Lower limb	●	●	●	●	●	●						●	●	●					●	●	●	●	●	●
Embryology									●	●	●						●				●	●	●	●

4 – Teaching and Learning Methods

Teaching Methods	Description
Lectures	The lecturers are conducted using: a. Audiovisual aids through animations and diagrams b. Interaction with the students through questions
Practical lessons	❖ The Egyptian students are divided into 10 groups. ❖ The Malaysian students are divided into 3 groups ❖ Each group is divided into three subgroups (A, B, C) ❖ The practical teaching is conducted using: **a.** Models **b.** Skeletons and individual bones **c.** Prossected specimens **d.** Plastinated specimens **e.** Plain X-ray films **f.** X-ray with dye films **g.** CT scan films **h.** MRI films **i.** Diagrams and posters **j.** Video tapes and movies. **k.** Power point presentations
Self learning	Self learning through giving them certain topics to search, collect data and present it in front of senior staff

5 – Student Assessment Methods:

Assessment ILOs matrix:

	A											B						C			D			
	1	2	3	4	5	6	7	8	9	10	11	1	2	3	4	5	6	1	2	3	1	2	3	4
Written Examination	●	●	●	●	●	●	●	●	●	●	●													
Structured Oral Examination	●						●	●	●	●		●	●	●	●	●	●							●
Objective structured Practical examination			●	●		●	●					●	●	●						●				
Log book		●											●			●		●	●					
Activity															●	●		●	●	●	●	●	●	●

Method of Assessment	Marks		Percentage
Final Written exam.	125 (30% MCQ,70%short essay)		50%
Objective structured Practical exam.	50	75	30%
Structured Oral exam.	25		
Midyear exam.	40	50	20%
Activity	5		
Log book	5		
Total	250		100%

Assessment Schedule:

Method of assessment	Description
Midyear written examination	Held at January, students should submit their Log books to sit for the examination
Final written examination	At the end of the academic year for all students.
Objective structured Practical exam.	At the end of the academic year for all students.
Structured Oral exam.	Held by the end of the academic year.
Activity	Essay and presentation by the end of the academic year
Log book	Students should submit their Log books to sit for the Midyear written examination

6 – List of References

6.1- Course Notes — Book authorized by department

6.2- Essential Books (Text Books)
a Cunningham's anatomy.
b) Gray's anatomy.
c) National books

7 – Facilities Required for Teaching and Learning

1. Dissecting room including cadavers, bones, plastic models and plastinated specimens.
2. Museum specimens and x-ray.
3. Visual aids.

Course Coordinator: **Prof. Dr. Adel Abdel-Mohdy Al Hawary**

Head of Department: **Prof. Dr. Adel Abdel-Mohdy Al Hawary**

GENERAL BLUEPRINT FOR SECOND YEAR

ANATOMY & EMBRYOLOGY DEPARTMENT

2015 - 2016

DISTRIBUTION OF TOTAL MARKS ON THE EXAMS

	Teaching hours:	Relative weight	Total Marks	Final written	Final MCQ	Midyear MCQ:
Head & neck:	40	33.33%	55			20
Neuroanatomy:	30	25.00%	41			10
Lower limb:	25	20.83%	34			–
Special embryology:	25	20.83%	34			10
Total:	120	100%	165	90	35	40

HEAD & NECK

Total marks: **100 marks.**

Percentage: **41.7%**

Distribution:

	Teaching hours:	Final written & MCQ	Midyear MCQ:	OSPE	Mark
Muscles:	**6**	**10**	**2**	**3**	**15**
Vessels:	**6**	**10**	**4**	**4**	**18**
Nerves:	**8**	**11**	**2.5**	**4.5**	**18**
Glands:	**5**	**5**	**2**	**3**	**10**
Regions:	**7**	**9**	**2.5**	**3.5**	**15**
Viscera:	**5**	**5**	**3**	**4**	**12**
Bones:	**2**	**_**	**2**	**6**	**8**
Joints:	**1**	**_**	**2**	**2**	**4**
Total:	**40**	**50**	**20**	**30**	**100**

NEUROANATOMY

Total marks: **55 marks.**

Percentage: **22.9%**

Distribution:

	Teaching hours:	Final written & MCQ	Midyear MCQ:	OSPE	Mark
Introduction:	**2**	**3**	**1**	**2**	**6**
Spinal cord:	**5**	**4**	**2**	**3**	**9**
Hind brain:	**8**	**5**	**3**	**4**	**12**
Mid brain:	**1**	**2**	**1**	**1**	**4**
Diencephalon:	**3**	**3**	**1**	**2**	**6**
Telencephalon:	**8**	**6**	**2**	**6**	**14**
Blood supply:	**3**	**2**	**-**	**2**	**4**
Total:	**30**	**25**	**10**	**20**	**55**

LOWER LIMB

Total marks: **50 marks.**

Percentage: **20.8%**

Distribution:

	Teaching hours:	Final written & MCQ	OSPE	Mark
Muscles:	**5**	**4**	**4**	**8**
Vessels:	**5**	**5**	**5**	**10**
Nerves:	**5**	**5**	**5**	**10**
Regions:	**6**	**6**	**6**	**12**
Joints:	**3**	**5**	**_**	**5**
Bones:	**1**	**_**	**5**	**5**
Total:	**25**	**25**	**25**	**50**

SPECAL EMBRYOLOGY

Total marks: **35 marks.**

Percentage: **14.6%**

Distribution:

	Teaching hours:	Final written & MCQ	Midyear MCQ:	Mark
From general to special:	**1**	**1**	**1**	**2**
Musculoskletal system:	**3**	**2**	**2**	**4**
Central Nervous System:	**2**	**1**	**1**	**2**
Body cavities & Respiratory system:	**2**	**1**	**1**	**2**
Urinary system:	**3**	**3**	**3**	**6**
Genital system:	**3**	**2**	**2**	**4**
Cardiovascular system:	**5**	**9**	**_**	**9**
Face, Palate & pituitary:	**3**	**2**	**_**	**2**
Pharyngeal apparatus:	**3**	**4**	**_**	**4**
Total:	**25**	**25**	**10**	**35**

ANATOMY LOG BOOK

2ND YEAR

2016/2017

رؤية كلية طب المنصورة

رؤية الكلية

أن نصنف إقليميا ونحقق التميز فى التعليم الطبى والبحوث وخدمة المجتمع.

Vision

To be ranked regionally and to achieve excellence in medical education, research and community service.

رسالة كلية طب المنصورة

رسالة الكلية

تقديم مستوى عال التميز فى التعليم والتدريب الطبى وتقديم خدمات صحية متميزة للمجتمع عن طريق المراكز الطبية المتخصصة وكذلك الإرتقاء بالبحث العلمى.

Mission

To provide distinguished best practice in medical education and community health care services through our specialized medical centers and scientific research.

Basic information	
Program title	Bachelor of Medicine and Surgery; MB, Bch
Department offering the course	Anatomy
Academic year	Second year
Total teaching hours	Total: 9 Lectures: 5 Practical: 4
Allocated marks	250 Marks
Allocated duration	September through May
Course director	Prof. Dr. Adel EL Hawary Head of the Department
Teaching staff	Professors : 12 Assistant professors: 3 Lecturers: 11 Assistant lecturers: 20 Demonstrators: 12

Weighing of assessment

	Percentage	Method	Weight
Mid-year exam	**20%**	MCQ	40 marks (16%)
Student activity		Power point Presentation	10 Marks (4%)
Final exam	**80%**	Written exam	90 Marks (36%)
		MCQ exam	35 Marks (14%)
		Practical (OSPE)	50 Marks (20%)
		Oral exam (OSPE)	25 marks (10%)
Total	**100%**		**250 Mark**

For the Anatomy (second year)

Faculty : Medicine
Department : Anatomy and Embryology Department

Course Specification:

Programme (s) on which the course is given : M.B.B.Ch program

Department offering the course : Academic year / level :	Anatomy and Embryology 2nd year
Date of specification approval :	29/12/2015

A- Basic information:

Title:	Medical Physiology						Code:	ANT.2
Lecture :	120	Tutorial:		Practical	120	Total:	240	

B- Professional Information:

1 - Overall Aims of Course

The overall aim of the course is to provide the students with the basic anatomical knowledge of the normal structure of the human body at the level of organs and systems of the head and neck, lower limb, brain & spinal cord and normal and abnormal growth and development of the different organs and systems and acquire the skill of correlating the anatomical facts with expected clinical problems.

2 – Intended Learning Outcomes of Course (ILOs)

A - Knowledge and Understanding:

By the end of the course, students should be able to:

A 1. Describe the basic anatomical structure of the head, neck, lower limb, brain and spinal cord.

A 2. Recognize the surface landmarks of the underlying bones, muscles and tendons, and internal structures (main nerves, vessels and viscera) for head, neck and lower limb.

A 3. List the different branches of nerves and vessels of head, neck and lower limb. A 4. Recall the actions of the different muscles of head, neck and lower limb.

A 5. Recognize the movements of the TMJ & different joints of the lower limb and the muscles involved in each movement.

A 6. Outline the major clinical applications of anatomical facts.

A 7. List clinical signs of nerve injuries and of brain or spinal cord damage based on their normal anatomy.

A 8. Discuss of the different neuroanatomical syndromes.

A 9. Explain the different stages of development of different organs and systems as well as errors in development.

A 10. Explain the anatomical facts based on their development.

A 11. Explain the causes of the congenital anomalies

B- Intellectual Skills:

By the end of the course, students should be able to:

B 1. Integrate the anatomical facts while examining the living subject in order to reach a proper diagnosis.

B 2. Relate the surface markings of different structures with the position or course of internal

structures of head, neck, lower limb and spinal cord

B 3. Assemble the different internal structures of head, neck, lower limb, brain and spinal cord in cadavers and preserved specimens.

B 4. Correlate the anatomical knowledge with clinical signs seen in cases of nerve injuries and CNS lesions.

B 5. Integrate his knowledge of neuroanatomy with those of neurophysiology and neurohistology.

B 6. Correlate his knowledge in embryology with clinical findings caused by errors in development.

P-Professional and Practical Skills:

By the end of the course, students should be able to:

C1. Design an anatomical model for different areas of the brain.

C2. Draw diagrams for vessels and nerves of upper limb, head and neck and for different sections of the brain and spinal cord and for vessels and nerves in the regions of the study.

C3. Elicit the normal anatomical structures on radiographs, ultrasonography, C.T. scan and nuclear magnetic resonance images.

T- General and Transferable Skills:

By the end of the course, students should be able to:

D1 Plan and work as a team.

D2 Use internet and learn searching skills.

D3 Recognize the scope and limits of their role as students and the necessity to collaborate with others

D4 Maintain a professional image concerning behavior, dress and speech.

3 – Contents:

Topics	Number of	lectures	Practical
1.Head and Neck: 1. SCALP (layers, blood supply, nerve supply and lymphatic drainage)	**2**	**1**	**1**
2. Face (muscles, nerve supply , blood supply and lymphatic drainage)	**3**	**1**	**2**
3. Posterior triangle (boundaries and contents).	**2**	**1**	**1**
4. Cranial cavity (Dural folds and sinuses).	**4**	**2**	**2**
5. Orbit (boundaries and contents).	**5**	**2**	**3**
6. Anterior triangle (boundaries and contents).	**4**	**2**	**2**
7.Submandibular region (gland and lymph nodes).	**6**	**2**	**4**
8. Parotid region (extent, capsule, features, relations, structure within the gland, parotid duct, nerve	**4**	**2**	**2**

9. Infratemporal fossa (muscles of mastication, mandibular nerve, maxillary nerve, sphenopalatine ganglion, otic ganglion and	**10**	**4**	**6**
10. Thyroid gland (shape, capsule, features, relations, nerve supply, blood supply, lymphatic drainage	**5**	**2**	**3**
11. Pharynx (muscles, sagittal section and palatine	**10**	**4**	**6**

12. Nose (lateral wall, arterial, nerve and lymphatic)	9	3	6
13. Larynx (cartilage, ligaments and muscles).	10	4	6
14. Mouth cavity (tongue muscles, blood supply, nerve	6	2	4
15. Cranial nerves (7^{th}, 9^{th}, 10^{th}, $11th$ and 12^{th}).	16	8	8
2.Neuroanatomy: 1. Development of the nervous system and congenital	2	1	1
2. Medulla, Pons and Midbrain)ventral and dorsal surface).	2	1	1
3. Fourth ventricle (boundaries, foramina, communications, cranial nerve nuclei in its floor and choroid plexus) and cerebellum (features, subdivisions and arterial supply)	4	2	2
4. Vertebrobasilar system& circle of Willis (site, formation, anatomical and clinical importance).	3	1	2
5. Diencephalon (boundaries, divisions and arterial supply) and third ventricle (boundaries, recesses,	4	2	2
6. Arterial supply of the brain (internal carotid artery, anterior cerebral artery, middle cerebral artery and	4	1	3
7. Venous drainage (superior cerebral veins and deep cerebral veins, and CSF (volume, composition, circulation, formation, absorption, function	3	1	2
8. Brainstem: internal structure	4	2	2
9. Cerebellar connections	4	2	2
10. Thalamus (boundaries, classification of thalamic nuclei, connection of thalamic nuclei, arterial	4	2	2
11. Cerebral hemisphere (sulci, gyri and higher brain	4	2	2
12. Basal ganglia & lateral ventricle (boundaries, connections, foramina and	4	2	2
13. Nerve fibers in CNS and the limbic system (component and function).	3	1	2
14. Spinal cord: anatomical organization of ascending tracts (gracile and cuneate tract, ventral and spinocerebral tract, lateral spinothalamic tract, ventral	4	2	2
15. Trigeminal system (sensation from the face and trigeminal plexus).	2	1	1
16. Motor systems & descending tracts (lateral and ventral corticospinal tracts, rubrospinal and tectospinal tract, lateral and medial vestibulospinal tract,	4	2	2

descending autonomic fibers).			
3.Lower limb: 1. Bones of Lower limb (hip bone, femur, tibia, fibula and foot).	**3**	**1**	**2**
2. Front of the thigh (fascia, muscles, vessels and nerves).	**8**	**4**	**4**
3.Medial aspect of the thigh (muscles, vessels and nerves)	**8**	**2**	**6**
4. Gluteal region (muscles, vessels and nerves).	**4**	**2**	**2**
5. Popliteal fossa (bounderies and contents).	**2**	**1**	**1**
6.Back of the thigh (muscles, vessels and nerves)	**10**	**4**	**6**
7.Anterior compartment of the leg (muscles, vessels and nerves)	**5**	**1**	**4**
8. Dorsum of the foot (muscles, vessels and	**4**	**2**	**2**
9. Back of the leg (muscles, vessels and nerves).	**4**	**2**	**2**
10. Sole of the foot (layers, muscles, vessels and	**3**	**2**	**1**
11. Joints of lower limb (type, components, ligaments, relations, movement, nerve and blood	**8**	**4**	**4**
4.Embryology: 1. Cardiovascular system (development and congenital	**4**	**4**	**-**
2. Development of Vertebral column and	**1**	**1**	**-**
3. Development of Limbs and congenital	**1**	**1**	**-**
4. Development of spinal cord and anomalies.	**1**	**1**	**-**
5. Genital system (development and anomalies).	**2**	**2**	**-**
6. Urinary system (development and anomalies).	**3**	**3**	**-**
7.Branchial arches (derivatives and anomalies).	**7**	**7**	**-**
8.Tongue (development and anomalies).	**2**	**2**	**-**
9.Thyroid gland (development and anomalies).	**2**	**2**	**-**
10.Development of mouth cavity and its anomalies	**2**	**2**	**-**
11.Face (development and anomalies).	**1**	**1**	**-**
12.Palate (development and anomalies).	**2**	**2**	**-**
13.Respiratory system (development and	**2**	**2**	**-**
TOTAL	**240**	**120**	**120**

Content ILOs Matrix:

	A											B						C			D			
	1	2	3	4	5	6	7	8	9	10	11	1	2	3	4	5	6	1	2	3	1	2	3	4
Head and neck	●	●	●	●	●	●						●	●	●					●	●	●	●	●	●
Neuro-anatomy	●					●	●	●				●	●	●	●	●		●	●	●	●	●	●	●
Lower limb	●	●	●	●	●	●						●	●	●					●	●	●	●	●	●
Embryology									●	●	●						●				●	●	●	●

4 – Teaching and Learning Methods

Teaching Methods	Description
Lecture	The lecturers are conducted using: a. Audiovisual aids through animations and diagrams
Practical lessons	The Egyptian students are divided into 10 groups. The Malaysian students are divided into 3 groups Each group is divided into three subgroups (A, B, C) The practical teaching is conducted using: **a.** Models **b.** Skeletons and individual bones **c.** Prossected specimens **d.** Plastinated specimens **e.** Plain X-ray films **f.** X-ray with dye films **g.** CT scan films **h.** MRI films **i.** Diagrams and posters j. Video tapes and movies
Self learning	Self learning through giving them certain topics to search, collect

5 – Student Assessment Methods:

Assessment ILOs matrix:

	A											B						C			D			
	1	2	3	4	5	6	7	8	9	10	11	1	2	3	4	5	6	1	2	3	1	2	3	4
Written Examination	●	●	●	●	●	●	●	●	●	●	●													
Structured Oral Examination	●						●	●	●	●		●	●	●	●	●	●							●
Objective structured Practical			●	●		●	●					●	●	●						●				
Log book		●											●			●		●	●					
Activity															●	●		●	●	●	●	●	●	●

Method of Assessment	Marks		Percentag
Final Written exam.	125 (30% MCQ,70%short		50%
Objective structured Practical	50	75	30%
Structured Oral exam.	25		
Midyear exam.	40		
Activity	5	50	20%
Log book	5		
Total	250		100%

Assessment Schedule:

Method of assessment	Descriptio
Midyear written examination	Held at January, students should submit their Log books
Final written examination	At the end of the academic year for all students.
Objective structured Practical exam.	At the end of the academic year for all students.
Structured Oral exam.	Held by the end of the academic year.
Activity	Essay and presentation by the end of the
Log book	Students should submit their Log books to sit for the

6 – List of References

6.1- Course Notes Book authorized by department

6.2- Essential Books (Text Books) a Cunningham's anatomy.
b) Gray's anatomy. c) National books

7 – Facilities Required for Teaching and Learning

1. Dissecting room including cadavers, bones, plastic models and plastinated specimens.
2. Museum specimens and x-ray.
3. Visual aids.

Course Coordinator: Prof. Dr. Adel Abdel-Mohdy Al Hawary

Head of Department: **Prof. Dr. Adel Abdel-Mohdy Al Hawary**

➢ List of references

Course notes: Mansoura department of anatomy books

Essential & recommended text books:

- Gray's Anatomy For Student
- Snell Rs: Clinical Anatomy By Regions
- Keith Moore, L and Persasud, TVN: The Developing Human
- Langman's Medical Embryology

Essential atlases:

- Netter's interactive Atlas of Anatomy
- Lippincott Williams Atlas of Anatomy
- Grant's Atlas of Anatomy
- Sobotta Atlas of Human Anatomy

Student selected activity (PowerPoint presentation)

Title: ……
……
……
……

Team members	Role of the student

Supervisors

- **Dr:**
- **Assistant lecturer:**
- **Demonstrator:**

Other activities

Student can participate in one of the following activities:

1. Making scientific models.
2. Making posters.
3. Making wall journals (anatomy should be the core of the contents).
4. Help in making anatomical jars.
5. Writing scientific article.
6. Participating in work shop when possible.
7. Giving short talk (presentation).
8. Working as models help demonstrating anatomical facts (example surface anatomy).
9. Winning the best anatomical image (hand draw, digital photo, x-ray, MRI, US, CT, contrast, radioisotopes).
10. Any other activities which might have a good scientific effect).

NB: Departmental committee will look at the student work and will decide marks on that particular work.

1st term Curriculum

Week		Specimen/ jar	At the end you should know (ILOs)
1	A		**Skull** 1. List the different bones which form eachof these normae. 2. Identify the important sutures in each norma. 3. Other features according to each norma **Norma verticalis;** 4. Describe the Bregma& lambda & realize their embryological origin 5. Define the Frontal, parietal eminences and Parietal emissary F. **Norma occipitalis;** 1. Describe the Ext. occ. Protuberance, ext. occ. Crest, inion. 2. Describe the Sup., inf. & highest nuchal lines. **Norma frontalis;** 1. The processes of each bone 2. The major foramina in the norma& their boundaries (orbit & ant. Nasal apertures) 3. Small foramina (infra, supraorbital & mental &zygomaticofacial). 4. Nasion, metopic suture, superciliary arch, glabella, anterior nasal spine Canine eminence & Canine and incisive fossae
	B		**Scalp**: 1. Describe extension of the scalp. 2. Describe the 5 Layers + attachment of epicranialaponeurosis. 3. Describe the Attachments of frontal bellies, occ. Bellies, motor supply, action. 4. Vessels (A & V), nerves, lymph.
2	A		**Face:** 1. Describe extension of the face. 2. Muscles; the orbicularis oculi (3 parts), orbicularis oris& buccinators. (origin, insertion, nerve supply & action). 3. Vessels (A & V). 4. Lymph.

	B		**Norma basalis interna**. **1. Ant. cranial fossa:** Orbital plate, lesser wing, ant. clinoid process, cribriform plate, jugumsphenoidale,frontal crest, crestagalli& foramen caecum. **2. Middle cranial fossa:** - Sellaturcica (hypophys. fossa, carotid grove,dorsum sellae, post. clinoid process &tuberc. sellae) - Optic groove& optic canal. - Cerebral surface of squam. temporal bone. - Greater wing+ ROS foramina+SOF - Petrous bone: trigeminal impression, tegmentympani,arcuate eminence, grooves for greater & lesser petrosal. nerves, carotid canal, foramen lacerum& internal auditory meatus. **3. posterior cranial fossa** - Internal occipital protub. & crest, foramen magnum, clavus, petro-occipital fissure, transverse & sigmoid sulcus & cerebellar fossa - Three foramina on one line; IOM, Jugular & hypoglossal canal.
3	**A**		**Cranial cavity 1** 1. Dural folds: define & name the 5 folds. 2. Site, shape, attachment& sinus contents of falxcerebri&cerebelli&temtoriumcerebelli. 3. Dural sinuses; cavernous, superior & inferior sagittal sinuses in details. 4. Site & termination of the remaining sinuses.
	B		**Cranial cavity 2** 1. Pituitary gland: parts, relation & bl. supply in brief. 2. Middle meningeal artery; origin, course termination, branches & surface anatomy. 2. Emissary vein; definition, importance& site

Week		Specimen/ jar	At the end you should know (ILOs)
4	A		**Orbit:** 1. Bony orbit in brief. 2. Extraocularms. (origin, insertion, nerve supply & action). 3. Ophthalmic artery& veins;Origin, course, termination, branches.
	B		**Nerves of the orbit:** 1. Motor; occulomotor, trochlear, &abducent. 2. Sensory; ophthalmic nerve (origin, course, exit, termination, branches & distribution of its branches). **Lacrimal apparatus in brief.** +innervation of lacrimal gland in details
5	A		**Brain stem** **1. Medulla:** -Ventral→ pyramid, olive, inferior cerebellar peduncle & lower 4 cranial nerves. -Dorsal→lower; gracile&coneate tubercles,tuberculumcinereum. Upper; inferior fovea &3 trigones,areapostrema&striamedull. of 4th ventricle. **2. Pons:** -Ventral→ basilar groove, transverse pontine fiber, middle 4 cranial nerves &cerebello-pontine angle. -Dorsal→medial eminence& facial colliculus, sulcus limitans& vestibular areas. **3. Midbrain:** -Ventral→2cerebral peduncle, oculomotor nerve &interpeduncular fossa in detail. -Dorsal→ 4 colliculi& trochlear nerve. - Lateral→ superior & inferior brachium &5 related structures.
			4th ventricle.

	B		Location, shape, boundaries, cranial nerve nuclei in floor, foramina, communication & choroid plexus. **Cerebellum** 1. Gross feature; 2 hemisphere (cortex & medulla; arbor vitae + 4deep nuclei) &vermis +lobes of inferior vermis only, notches, peduncles & fissures. 2. Subdivision; anatomical, longitudinal & functional.
6	**A**		**Vertebro-basilar system.** 1. Vertebral artery: origin, course, termination & branches. 2. Basilar artery: origin, course, termination & branches. **Circle of willis.** Site, formation & importance.
	B		**Norma lateralis** 1. Identify the skull bones forming the temporal and infratemporal fossae. 2. Name the sutures+pterion &asterion. 3. supramastoid crest &suprameatal triangle. 4. pt.palatine fossa; boundaries &communications. **Themandible.** 1. Identify parts (ramus &body). 2. Describe ramus; coronoid &condylar processes, mandibular notch, ant. oblique line, angle of mandible, mandibular canal, lingula, myelohyiod line & groove. 3. Describe the body; alveolar arch, symphysismenti mental foramen, tuberosity, & tubercles, genial tubercles & digastric, sublingual, submandibular fossae.

Week		Specimen/ jar	At the end you should know (ILOs)
7	A		**Temporal & infratemporal region** 1. Muscles;Temporalis, masseter, med.& lat.pterygoids (origin, insertion, nerve supply & action) 2. Relation of lat. pterygoid only. 3. Mandibular nerve; (origin, course, exit, termination, branches & distribution of its branches). 4. Otic ganglion; site, relation, roots & distribution.
	B		**Maxillary nerve & sphenopalatine ganglion.** 1. Maxillary nerve; (origin, course, exit, termination, branches & distribution of its branches). 2. sphenopalatine ganglion.site, roots & distribution. **Maxillary artery** Origin, course, termination, branches. **Maxillary vein** Termination& tributaries. **Pterygoid venous plexus.** Site &comunication
8	A		**Parotid gland:** - Extension, division, Relations, nerve supply in detail, lymph drainage. **Parotid duct.** - Length, termination & surface anatomy.**Sternomastoidms.** (origin, insertion, nerve supply & action) **Post. triangle** 1. Boundaries, Division & Content. 2. Nerves: ♦ 3. Subclavian artery & vein & external jugular vein in details; origin, course, termination & branches or tributaries.
			Infrahyoid ms. Sternohyoid, sternothyroid, thyrohyoid&omohyoid(

	B		origin, insertion, nerve supply & action) **Ansa cervicalis.** Formation & branches.**Thyroid gland:** - Division, relations, blood supply (superior & inferior thyroid arteries in detail), lymphatic drainage. **Parathyroid gland** - Site, blood supply & clinical importance. **Median structures of the neck.** - Just enumeration.
9	**A**		**Submandibular region:** **1. Suprahyoidms;** digastric, stylohyoid, mylohyoid, geniohoid&hyoglossus (origin, insertion, nerve supply & action + relation of hyoglossus only) **1. Submandibular gland:** Extension, division, Relations, nerve supply in detail & duct (length, relation &terminatn). **2. Sublingual gland:** Relations, nerve supply & duct (number & termination) **3. Submandibular ganglion.** - Site, roots & branches. **4. lingual artery:** Origin, course, terminatn& branches.
	B		**External carotid artery:** Origin, termination, branches in details except sup. Thyroid& lingual. **Int. jugular vein.** Origin, course, termination & tributaries.

Week		Specimen/ jar	At the end you should know (ILOs)
10	A		**Subclavian system, scalene ms**
	B		**Lower 4 cranial nerves** - Type of fiber, nuclei, exit from skull, course & branches.
11	A		**Diencephalon:** Boundaries & division 1. Thalamus: Boundaries& bl. supply 2. Hypothalamus: Boundaries& bl. supply 3. Subthalamus: Boundaries &cotent (subthalamic nucleus &zonainserta) 4. Epithalamus:posterior commissure, hapenular nucleus, striamedullaris thalami & pineal gland, **3rd ventricle.** Location, boundaries, communication, recesses & choroid plexus.
	B		**Cerebral hemisphere** - Lateral, medial & inferior surfaces→ Sulci & gyri & cortical areas. Sagittal section of brain
12	A		**Lateral ventricle.** Coronal & horizontal section of brain
	B		**Blood supply of the brain:** Internal carotid artery, ACA, MCA, PCA. Arterial supply of the int. capsule. Venous drainage of the brain.

2nd term curriculum

Week		Specimen/ jar	At the end you should know (ILOs)
1	A		**Norma basalis externa.** **Cervical vertebrae, craniovertebral articulations**
	B		**Nose:** Walls, features, blood supply, nerve supply, paranasal sinuses in brief. **Palate:** muscles, arteries, nerves. **Tounge:** Parts (names), muscles, nerves, lymph. drainage.
2	A		**pharynx:** parts, features, muscles, gaps, nerve supply.
	B		**larynx:** cartilages, membranes, cavity, muscles in brief, nerves & arterial supply. **Lymp nodes of head & neck**
3	A		**Ear:** External ear in brief. Tympanic membrane in details. Middle ear in details **Facial nerve** in details.
	B		**Lower limb** **General features of:** Hip bone, femur, upper end of tibia.

Week		Specimen/ jar	At the end you should know (ILOs)
4	A		**Front & med. compartment of thigh:** Muscles in details
	B		**Femoral triangle.** **Femoral sheath & canal.** **Adductor canal.**
5	A		**Femoral artery& profunda femoris in details +** collateral circulation in brief. **Femoral vein.** **Femoral & obturator nerves.**
	B		**Gluteal region:** Muscles + small lateral rotators. Nerves of the gluteal region (names + sciatic nerve in details). Arteries of the gluteal region (names). Ligaments & sciatic foramina.
6	A		**Back of the thigh (muscles).** **Popliteal fossa:** Boundaries & content. Popliteal artery (O, T, Br). Popliteal vein. Tibial & common peroneal nerves(O, T, Br).
	B		**General features of:** **Tibia, fibula, bones of the foot.**

Week		Specimen/ jar	At the end you should know (ILOs)
7	A		**Front of the leg:** Muscles. Ant. Tibial artery (O, T, Br). Ant. Tibial nerve (O, T, Br). Extensor retinacula.
	B		**Dorsum of the foot:** Muscle& dorsalis pedis artery (O, T, Br). **Lateral compartments of the leg:** Muscles, peroneal retinacula, Musculocutaneous nerve.
8	A		**back of the leg:** Muscles & flexor retinaculum. Post. tibial artery& nerve (O, T, Br).
	B		**Sole of the foot:** Muscles (name& nerve supply). Arteries& nerves of the sole (O& Br).
9	A		**Hip & knee Joints** Type, articular surface, ligaments.
	B		**Rest of joints of lower limb** Type, articular surface, ligaments. Arches of the foot.

Intended Learning Outcomes (ILOs):

A: Knowledge and understanding (K):

- **K1: Describe** the basic anatomical structure of the different organs and systems of the human body.
- **K2: Recognize** the surface landmarks of the underlying bones, muscles and tendons, and internal structures (main nerves, vessels and viscera).
- **K3: Enumerate** the different branches of nerves and vessels.
- **K4: Recall** the actions of the different muscles.
- **K5: Distinguish** the movements of different joints and the muscles responsible for each movement.
- **K6: Outline** the major clinical applications of anatomical facts.
- **K7: Predict** clinical signs of nerve injuries based on their normal anatomy.
- **K8: Explain** the different stages of human development and growth.
- **K9: Explain** the anatomical facts based on their development.
- **K10: Discuss** errors in development of the different systems
- **K11: Explain** the causes of the congenital anomalies.

B: Intellectual skills (I):

- **I1: Integrate** the anatomical facts while examining the living subject in order to reach a proper diagnosis.
- **I2: Relate** the surface markings of different structures determine the position or course of internal structures.
- **I3: Assemble** the different internal structures in cadavers and preserved specimens.
- **I4: Design** an anatomical model for different organs.

- **I5: Draw diagrams** for different organs, vessels and nerves.
- **I6: Interpret** the normal anatomical structures on radiographs, ultrasonography, C.T. scan and nuclear magnetic resonance images.
- **I7: Correlate** the anatomical knowledge with clinical signs seen in cases of nerve injuries.
- **I8: Correlate** his knowledge in embryology with clinical findings caused by errors in development.

C: Professional and practical skills (P):

- **P1: Make** critical judgments based on a sound knowledge base
- **P2: Recognize** the scope and limits of their role as students and the necessity to collaborate with others.
- **P3: Maintain** a professional image concerning behavior, dress and speech.
- **P4: Manage** the time in their study and future career.

D: General and transferable skills (T):

- **T1:** responsible towards **working as a team**.
- **T2: Use** internet and learn searching skills.

Attendance

Date	Section	Signature

ANATOMY LOG BOOK

Date	Section	Signature

ANATOMY LOG BOOK

Date	Section	Signature

ANATOMY LOG BOOK

Date	Section	Signature