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**