Structure of Thorax and abdomen -MED 1206

Year 1 Semester 2

Credits: 4 **Module Coordinator: Dr. SMK Gamage**

CONCEPT	OBJECTIVES	Duration	T/L activity
1. Osteology and surface marking of thorax and abdomen	Student should be able to: • identify and orientate the bones that form the thoracic cage • state the boundaries of the thoracic inlet outlet • state and demonstrate the bony landmarks of the thorax • count the ribs and intercostal spaces. • demonstrate the surface markings of the heart, pericardium, lungs and the pleura. • identify and orientate the lumbar vertebrae and bones forming the pelvis. • state the boundaries of the pelvic inlet and outlet. • define the greater and lesser pelvic cavities • identify important muscle attachments on the bones studied	4hrs	PD
2. Anterior thoracic wall	• describe the arrangement of the muscles of the chest wall • describe the arrangement of structures in the intercostal space • describe the movement of the chest wall during respiration and state its mechanism • describe the blood supply, nerve supply and lymphatic drainage of the chest wall and	3 hrs 12hrs	Lectures Dissection

3. Anterior abdominal wall and Inguinal canal	intercostals spaces • draw and label the dermatomes of the chest wall • describe the arrangement of muscles of the anterior abdominal wall • describe the formation of the rectus sheath • describe the formation of the inguinal canal and its boundaries • state the contents of the inguinal canal • describe the coverings of the spermatic cord • describe the formation of hernia • explain the embryological descent of testes in relation to adult anatomy • describe development of anterior body wall • describe dermatomes of chest and abdominal walls	1 hr	Body side SGD
4. Mediastinum and mediastinal viscera	• describe the boundaries of the mediastinum and its divisions • describe the structures in the different divisions of the mediastinum and state their relations • describe the arrangement of the pericardium • state the nerve supply of the pericardium • state the functions of the pericardium • state the clinical correlations of the pericardium • describe the position of the heart and the great vessels in the mediastinum • describe the internal and external appearance and structure of the heart(chambers, valves, ect) • describe the blood supply of the heart. • identify the cardiac silhouette and the parts of the heart and great vessels that contribute to the outline of it • describe the conducting system of the heart • describe the arrangement of the great vessels • describe the relations of the heart and the great vessels	2hr 15hrs 1 hr 2hrs	Lectures Dissections Body side SGD Tutorial

	• describe the microscopic structure of heart and blood vessels and correlate the structure function relationship • describe the anatomy of lymphoid organs and lympho-reticular system • describe the clinical correlations of the heart and great vessels	2 hrs 3 hrs	Lectures (Histology& Clinical Anatomy) PD (Histology)
5. Development of the heart and blood vessels	• describe the development of the heart and blood vessels • describe the foetal circulation • describe the circulatory changes that occur at birth • describe the congenital anomalies of the heart and blood vessels	1 hr	Lecture
6. Lungs and pleurae	• describe the anatomy of the pleura and pleural cavities • surface mark the pleura and lungs • state and describe the common clinical problems of the thoracic cavity (pleural effusion, pneumothorax, haemothorax) • describe the anatomical basis of the pleural tap and surgical approaches to the thorax • identify the lungs and parts of the airways • describe the bronchial tree and bronchopulmonary segments • describe and identify the microscopic structures of the lungs and bronchial tree • correlate the structure of lungs and airways with its function • describe the blood supply, nerve supply and lymphatic drainage of lungs and airways • identify lungs and airways in relation to other structures in the thoracic cavity • describe the surface projections of the apex of the lungs and the fissures of the lungs	3 hrs 3hrs 3 hrs 2 hrs	Lectures Dissection PD (Histology) Tutorial

7. Development of the respiratory tract	• development of the respiratory system and associated developmental abnormalities		Lecture
8. Cross Sectional anatomy of thorax	• understand the importance of cross sectional anatomy • identify structures in cross sections of the thorax • identify the above structures in a cross sectional radiographs	1 hr 3 hrs	Lecture PD
9. Diaphragm	• describe the component parts of the diaphragm and state its functions • describe the nerve supply and blood supply of the diaphragm • state and identify structures passing through the diaphragm including the vertebral levels • use the knowledge of anatomy in examining the respiratory system	1hr 3 hrs 1 hr	Lecture Dissections Body side SGD
	• state and describe the common clinical problems of the thoracic cavity • describe the clinical correlations of diaphragm related to respiration • describe the development of the diaphragm including its congenital abnormalities	1 hr	Lecture
10. General arrangement of gastrointestinal system	• state the main functions of the gastrointestinal system. • outline the general structure of gastrointestinal system to perform the functions • describe the general pattern and microscopic anatomy of the alimentary canal	1 hr	Lecture

11. Oral cavity	• describe the boundaries of the oral cavity. • state how the structures in the oral cavity are adapted to perform the functions (teeth, tongue, salivary glands etc) • outline the macroscopic and microscopic features of the structures in the oral cavity including the salivary glands • state and identify the muscles forming the floor of the mouth • name and identify the types of teeth in the deciduous and permanent dentition • state the development and eruption times of teeth and its relevance in aging	2 hrs	Lectures PD
12. Surface anatomy of abdomen	• State how the abdomen is divided into nine regions and four quadrants • State the surface projections of abdominal structures. • Outline the procedure of clinical examination of the abdomen.	1 hr 3 hrs	Video demonstration PD in skills lab
13. Abdominal cavity and its compartmentalization	• describe the general arrangements of viscera in the abdominal cavity • understand the arrangement of the peritoneum and its relationship with the abdominal organs • describe the peritoneal reflexions • localise the viscera within the abdominal cavity and learn their gross landmarks and features	1 hr 6 hrs	lecture Dissections

14. Abdominal viscera	• describe the gross anatomy of abdominal viscera (oesophagus, stomach, duodenum, jejunum, ileum, colon, rectum and anal canal, liver and biliary system, pancreas, spleen,) • describe the lymph drainage and nerve supply • describe the microscopic anatomy of abdominal viscera. (oesophagus, stomach, duodenum, jejunum, ileum, colon, rectum and anal canal, liver and biliary system, pancreas) • list the functions of abdominal viscera. • explain the basis of structure function relationship	5 hrs 3 hrs 12 hrs 3 hrs 2 hrs 1 hr	Lectures- Gross anatomy of 1. oesophagus and stomach (1hr) 2. Small and large intestines, lymphatics and nerves (2hr) 3. Liver, biliary system, pancreas and spleen (2hrs) Lectures - Histology of GIT Dissections Histology PD Body side SGD Tutorial
15. Development of the gatro-intestinal system	• describe the development of the gastro-intestinal system and its anomalies	4 hrs	Lectures
16. Posterior abdominal wall and retroperitoneum	• describe the arrangement of muscles and fascia of the posterior abdominal wall • describe the anatomy of the posterior abdominal wall and the retroperitoneal structures (abdominal aorta, IVC, kidneys, ureters, bladder and adrenal glands)	1x2 hrs 3 hrs	Lectures Dissection

	• list the components of the urinary system • describe the gross structure of the kidneys, ureters and bladder • describe how the urinary system is adapted to perform its function • describe the unique blood circulation of the kidney • describe the venous and lymphatic drainage and nerve supply of the kidney • describe the histological appearance of the urinary system	2 hrs 3 hrs	Lecture Dissection