## Anatomy

**Code: AE 305**

### Basic Information

<table>
<thead>
<tr>
<th>Program Title</th>
<th>Bachelor of Medicine and Surgery; MB, BCh</th>
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<tr>
<td>Department Offering the Course</td>
<td>Anatomy</td>
</tr>
<tr>
<td>Academic year / Level</td>
<td>Second year</td>
</tr>
<tr>
<td>Date of Specification Approval</td>
<td>4/9/2011</td>
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| Total Teaching Hours | Total: 240 hr  
Lecture 120 hrs  
Tutorial 10 hrs  
Practical 110 hr (including 40 hr e-lab) |
| Allocated Marks | 250 Marks |
| Allocated Duration | September through May (as per student) |
| Course Director | Prof. Dr. Mohamad Kamal Tawfik  
“Head of Anatomy Department” |
| Teaching Staff | 22 Professors  
7 Assistant Professors  
17 Lecturers  
13 Assistant lecturers  
10 Demonstrators |
# Course contents

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4
### Development Of The Genital System

1. Development of The Gonads
2. Genital Ducts (Mesonephric and Paramesonephric)
3. Development of The Vagina and Its Anomalies
4. Development of The External Genitalia and Genital Gland Anomalies (Hermaphroditism and Intersex)

### HEAD and NECK (33.3%)

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L: lecture, T: Tutorial, P: Practical including e-lab, C: Clinical, O: Others: Directed Self learning
## Weighing of Assessments

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*Continuous Assessment: 20%*  
*Mid-Year Exam: 8%*  
*Final: 80%*
List of References

Course Notes: Departmental books

Essential Books (Text Books) (Available at department and faculty library): Gray's Anatomy.

Recommended Books:

1. Snell RS: Clinical Anatomy by Regions
2. Moore KL and AF Dalley: Clinically Oriented Anatomy
3. Keith Moore, L and Persaud, TVN; The Developing Human

Periodicals, Web Sites: http://mic2.shams.edu.eg/
The Lab stations

I- Head & Neck:

Station 1: Norma verticalis

* List the different bones which form the norma verticalis.
* Identify the important sutures in this norma
* Describe the Bregma & lambda & realize their embryological origin
* Define the Frontal, parietal eminences and Parietal emissary F.

Station 2: Norma frontalis

Describe:

* The different bones which form the norma frontalis
* The parts & processes of each bone
* The major foramina in the norma & their boundaries (orbit & ant. Nasal apertures)
* Small foramina
  * Nasion, metopic suture, superciliary arch, glabella & Canine eminence

Station 3: Norma occipitalis

* Describe the Ext. occ. Protuberance, ext. occ. Crest, inion.
* Describe the Sup., inf. & highest nuchal lines.
Station 4: Scalp layers and occipito-frontalis

*Describe the 5 layers of the scalp

*Describe the Attachments of frontal bellies, occ. Bellies & epicranial aponeurosis

Station 5: Muscles & vessels of scalp

*List the different parts of occipitofrontalis muscle

* Describe the important arteries & veins of scalp

Station 6: Nerves of scalp

*Demonstrate the sensor y innervations of the scalp in front & behind the auricle

Station 7: Face & parotid gland & duct

*Demonstrate the parotid gland in cadaver

* Localize the 4 points which mark the surface anatomy of the parotid gland

*Palpate the parotid duct

*Visualize the opening of the parotid duct

Station 8: Muscles & vessels of face

*Define the orbicularis oculi, orbicularis oris & buccinators

* Localize the bony attachment of these muscles

* Identify the facial & trans. Facial artery
Station 9: Nerves of face

* Localize the nerves of the face

* Define the areas supplied by the different divisions of the trigeminal nerve

Station 10: Dural folds and dural sinuses

* Locate falx cerebri, tentorium cerebelli, diaphragma sellae, and falx cerebelli in the cadaver cranial cavity

* Identify the superior sagittal sinus at the attached margin of the falx cerebri, and the straight sinus at the junction of the falx cerebri with the tentorium cerebelli.

* Describe the location of the paired venous sinus; sphenoparietal, cavernous, superior and inferior petrosal, transverse, and sigmoid sinuses, in relation to the cranial cavity of the opened skull.

Station 11: Intracranial course of cranial nerves

* Identify the intracranial course of the cranial nerve on a diagram of the cranial cavity.

* Locate on the skull the foramen or canal through which each cranial nerve leaves the cranial cavity.

Station 12: Surface anatomy of the middle meningeal artery

* Identify on the skull the groove produced by the middle meningeal artery after its entrance through the foramen spinosum.

* Locate on the skull site of the pterion.
* demonstrate on a living subject (a student) how to locate the pterion and draw the surface markings of the middle meningeal artery.

**Station 13: Bony orbit**

* identify the skull bones forming the orbital opening and walls of the orbit

* locate the fissures and foramina of the orbit and identify the regions they connect with the orbit; revise main structures passing through each.

**Station 14: Orbit**

* demonstrate the oblique and recti muscles

* identify the sensory and motor nerves of the orbit

* locate the ophthalmic artery.

**Station 15: wall and contents of the orbit**

* identify the details of the nerves and vessels of the orbit

* demonstrate the components of the lacrimal apparatus

**Station 16: Skull and Mandible**

* identify the skull bones forming the temporal and infratemporal fossae

* describe the parts of the ramus of the mandible.

* locate on the bone, the origin and insertion of the 4 muscles of mastication
*locate on the bone, the attachments of the 4 ligaments (temporo-, stylo-, spheno-, and pterygo-mandibular ligs) attached to the mandible

**Station 17:**

* demonstrate the 4 muscles of mastication
* identify the maxillary artery
* locate the branches of the mandibular nerve mainly the lingual and the inferior alveolar nerves.

**Station 18:**

* identify the sternocleidomastoid muscle
* describe the boundaries, roof and floor of the posterior triangle.
* locate the external jugular vein
* locate the great auricular, lesser occipital and accessory nerves.
* identify the roots and trunks of the brachial plexus
* locate the subclavian vessels.

**Station 19:**

* demonstrate more details of the nerve contents of the posterior triangle
* identify the branches of the thyrocervical trunk reaching the posterior triangle (transverse cervical and suprascapular arteries).
Station 20:
* Outline the surface anatomy of spinal part of accessory nerve, brachial plexus and the external jugular vein on a living subject.

Station 21:
* Identify the boundaries of anterior triangle.
* Locate the digastric and omohyoid muscles.
* Describe the boundaries, roof and floor of submental, digastric and muscular triangles.
* Locate the submandibular salivary gland

Station 22:
* Describe the boundaries, roof and floor of the carotid triangle.
* Locate the carotid system arteries; common carotid artery, internal and external carotids
* Demonstrate the internal jugular vein.
* Identify the last three cranial nerves (X, XI and XII)
* Locate the cervical part of sympathetic trunk.

Station 23:
* Define the midline structures of the front of the neck above and below the hyoid bone.
* Locate these structures on the living subject.
Station 24:

* identify the suprahyoid muscles.
* locate submandibular gland.
* show the facial artery and lingual arteries
* demonstrate the structures lying on the lateral surface of hyoglossus.
* locate the submandibular salivary gland

Station 25: Bones (mandible, hyoid bone)

* identify the attachments of the suprahyoid muscles on the mandible.
* identify the attachments of the suprahyoid muscles on the hyoid bone.

Station 26:

* recognize the sublingual fold, sublingual papilla, frenulum of the tongue on the floor of the mouth.
* locate these structures on the living subject.

Station 27:

* identify position and shape of the thyroid gland.
* demonstrate the superior and inferior thyroid arteries.
* locate the external laryngeal (if possible) and recurrent laryngeal ns.
*show the related structures (trachea, oesophagus, medially; the contents of the carotid sheath, posterolaterally; the inferior thyroid vein, at lower border of isthmus.

**Station 28: Skull (norma basalis externa)**

*identify the bones forming the base of the skull

*locate the main foramina in the anterior, middle, and posterior parts of the skull base

**Station 29: transverse section of the neck**

*recognize the arrangement of the cervical fascia.

*locate the thyroid gland trachea oesophagus pretracheal fascia

*recognize the carotid sheath and its contents.

*identify the prevertebral fascia and retropharyngeal space

*pinpoint muscles is cross section (trapezius, sternocleidomastoid, infrahyoid muscles, scalenus anterior and medius)

**Station 30:**

*identify scalenus anterior muscle.

*locate the phrenic nerve on the anterior surface of scalenus anterior.

* demonstrate boundaries of vertebral triangle.

*show the branches of the first part of subclavian artery; thyrocervical trunk, internal thoracic and artery vertebral
artery, the latter crosses the triangle from its base to its apex.

**Station 31: first and second ribs**

*Explain how to identify the first and second ribs

*Show the main features of the first rib; scalene tubercle, grooves for subclavian vessels and muscle attachment.

*Show the main features of the second rib; tubercle for serratus anterior and muscle attachment

**Station 32: Skull (muscle attachments around the foramen magnum)**

*show the external occipital crest, external occipital protuberance, superior and inferior nuchal lines.

*locate the attachment of the following muscles.

1- Semispinalis capitis.
2- Superior oblique.
3- Rectus capitis posterior minor.
4- Rectus capitis posterior major.

**Station 33: Cervical vertebrae (Typical & Atlas)**

*Identify the main features of a typical cervical vertebra.

*Identify the main features of the first cervical vertebra (Atlas).

*Show the groove for vertebral artery on posterior arch of atlas
*Pinpoint to the articulations of atlas.

**Station 34: Cervical vertebrae (Axis & 7th)**

* Identify the main features of the second cervical vertebra (Axis).
* Pinpoint to the articulations of axis.
* Show the main features of the 7th cervical vertebra.
* Mention which structure passes through the foramen transversarium of the 7th cervical vertebra.

**Station 35: Suboccipital triangle**

* Demonstrate the boundaries of the suboccipital triangle.
* Locate the greater occipital nerve in the roof of the triangle.
* Locate the third part of vertebral artery.
* Show the suboccipital nerve.

**Station 36: Oral cavity**

* Identify the division of the oral cavity into vestibule and oral cavity proper.
* Define the opening of the parotid duct in the vestibule of the mouth.
* Show the boundaries of the oral cavity, and the palatoglossal arches.
* Pinpoint to the sublingual papillae and sublingual folds.
Station 37: Tongue

* Identify the parts of the tongue; tip, dorsum, inferior surface and root.

* Demonstrate the division of the dorsum into ant. 2/3 (palatine part) and posterior 1/3 (pharyngeal part) by sulcus terminalis.

* Show the main features of both parts.

* Pinpoint to the frenulum of the tongue

* Identify the 4 extrinsic and 4 intrinsic muscles of the tongue.

Station 38: Sagittal section

* Demonstrate the hard and soft palates and the palatoglossal arches.

* Show the palatine and pharyngeal parts of the dorsum of the tongue

* Locate the genioglossus, geniohyoid, and mylohyoid muscles.

Station 39: Pharynx

* Identify the extent of the pharynx from base of skull to the 6th cervical vertebra.

* Define 3 divisions of the pharynx; naso-, oro- and laryngopharynx.

* Show the opening of the auditory tube and the salpingopharyngeal fold on the sides of the nasopharynx.

* Demonstrate the palatine tonsil and tonsillar sinus.
*locate the epiglottis.

**Station 40: Pharynx opened from behind**

* Identify posterior nasal apertures and nasal septum
* Demonstrate oropharyngeal isthmus and the pharyngeal part of the tongue
* Show epiglottis and inlet of the larynx

**Station 41: Constrictor muscles**

* Demonstrate the superior, middle and inferior constrictors.
* Pinpoint to the structures passing in the gaps above and below each of the constrictor muscles

**Station 42: Nose and larynx**

* Identify the boundaries of the nasal cavity
* Identify the 3 nasal conchae on the lateral wall of the nasal cavity.
* Locate the sphenoethmoidal recess and the 3 meatuses.
* Pinpoint to the structures opening in the nasal meatuses.
* Identify the boundaries of laryngeal inlet (epiglottis, aryepiglottic folds).
* Demonstrate the vestibular fold, vocal fold and laryngeal ventricle (sinus)
Station 43: Larynx

* Identify the main cartilages of the larynx (thyroid, cricoid, epiglottis and arytenoid)

* Demonstrate how these cartilages articulate together.

* Locate the main membranes and ligaments of the larynx (thyrohyoid membrane, cricothyroid membrane, vocal ligament)

Station 44: Ear

* Demonstrate the 3 parts of the ear (external, middle and internal).

* Pinpoint to external auditory meatus and the ear drum at its bottom.

* Show the walls of the tympanic cavity.

* Locate the epitympanic recess.

* Identify the 3 auditory ossicles (malleus, incus and stapes).

* Show the auditory (pharyngotympanic) tube.

Station 45: X-Ray AP and Lateral views

AP view:

Locate:

- Oral cavity, nasal cavity, nasal septum.
- Maxillary and frontal air sinuses
- Orbit.
Lateral view:

Identify:

- Anterior, middle and posterior cranial fossae, and Sella turcica
- Orbit
- Oral cavity
- Cervical bone number
- Frontal and sphenoidal air sinuses

Station 46: CT sinus view

Pinpoint:

- All paranasal sinuses.
- Nasal septum
- Orbit
- Oral cavity
- Hard palate

Station 47: Anomalies of the face, nose and palate

- Cleft lip.
- Cleft palate.
- Oblique facial cleft.
- Macrostomia.
- Microstomia.
Station 48: Anomalies of the tongue, thyroid and branchial cysts

- Ankyloglossia (Tongue Tie).
- Bifid tongue.
- Thyroglossal cyst.
- Branchial cyst.

Station 49: Anomalies of the skull

Pinpoint:

- Acrania.
- Scaphocephaly.
- Acrocephaly.
- Plagiocephaly


**II- Neuroanatomy**

**Station 1: Surfaces, borders, poles and lobes of cerebral hemisphere**

*Identify the superomedial, inferolateral, and medial (medial occipital and medial orbital) borders of the cerebral hemisphere.

*Identify the superolateral, medial and inferior surfaces of the cerebral hemisphere.

*Identify the frontal, occipital and temporal poles of the cerebral hemisphere.

*Locate the central and lateral sulci.

*Demonstrate how to divide the superolateral surface into 4 lobes (frontal, parietal, temporal and occipital).

**Station 2: Sulci and gyri of frontal and parietal lobes**

Locate:

* Frontal lobe: **Sulci:** (precentral, superior, inferior frontal sulci) and **Gyri:** precentral, superior, middle and inferior frontal gyri.

*Parietal lobe: **Sulci:** (postcentral and intraparietal sulci) and **Gyri:** postcentral gyrus, superior and inferior parietal lobules, supramarginal and angular gyri
Station 3: Sulci and gyri of temporal lobe and insula

Locate:

* Temporal lobe: **Sulci**: (superior and inferior temporal sulci) and **Gyri**: Superior, middle and inferior temporal gyri

* Demonstrate how to locate the Insula in the depth of the posterior ramus of the lateral sulcus.

Station 4: Sulci and gyri of the medial surface of cerebral hemisphere

* Locate the callosal, cingulate, parietooccipital, pre- and post- calcarine sulci

* Locate the medial frontal gyrus, the paracentral lobule, the precuneus, the cuneus and the lingual gyrus

Station 5: Sulci and gyri of the inferior surface of the cerebral hemisphere

* Identify the orbital and tentorial parts of the inferior surface of cerebral hemispheres.

* Show the following on the orbital part:

  **Structures**: olfactory bub and olfactory tracts.

  **Sulci**: olfactory sulcus and H-shaped orbital sulcus.

  **Gyri**: gyrus rectus and orbital gyri.

* Show the following on the tentorial part:

  **Sulci**: collateral, occipitotemporal sulci.
**Gyri:** uncus, parahippocampal, lingual, medial and lateral occipitotemporal gyri.

**Station 6: Corpus callosum and diencephalon**

* Demonstrate parts of the corpus callosum; rostrum, genu, body and splenium.

* Demonstrate the fornix, lateral ventricle, head of caudate and thalamus

* Identify the boundaries and structures seen in the interpeduncular fossa.

**Station 7: horizontal section of cerebral hemisphere (cadaver)**

* Show Ant. and post. horns of lateral ventricle.

* Localize head of caudate, thalamus and lentiform nucleus.

* Pinpoint to the different parts of internal capsule

* Locate the external capsule and insula.

**Station 8: horizontal section of cerebral hemisphere (Plastic model)**

* Show Ant. and post. horns of lateral ventricle.

* Localize head of caudate, thalamus and lentiform nucleus.

* Pinpoint to the different parts of internal capsule

* Locate the external capsule and insula.

**Station 9: horizontal section of cerebral hemisphere**
*Show Ant. and post. horns of lateral ventricle.

*Localize head of caudate, thalamus and lentiform nucleus.

*Pinpoint the different parts of internal capsule

*Locate the external capsule and insula.

**Station 10: vertebral and basilar arteries**

*Show the vertebral arteries.

*Identify the basilar artery

*Locate the cerebellar arteries

*Locate posterior cerebral artery

**Station 11: Internal carotid artery**

* Show the termination of the internal carotid artery

*Identify the course of anterior and middle cerebral arteries

*Pinpoint cortical regions supplied by each of the 3 cerebral arteries

*Locate the anterior and posterior perforated substances.

**Station 12: Circle of Willis**

*Show the location of the circle of Willis.

*Identify the arteries sharing in the formation of the circle of Willis.
**III- Abdomen**

**Station 1: Muscle of the anterior abdominal wall**

* Show on the hip bone iliac crest, pubic crest, pubic tubercle and pectineal line.

* Demonstrate the external oblique, superficial inguinal ring and inguinal ligament

* Demonstrate the internal oblique and transversus abdominis muscles.

* Locate the attachment of the three muscles on the hip bone

* Locate the superficial inguinal ring.

**Station 2: Rectus sheath, rectus abdominis muscle and the neurovascular bundle of the anterior abdominal wall**

* Show the formation of the rectus sheath.

* Localize the rectus abdominis muscle.

* Show the inferior epigastric artery on the back of the rectus abdominis.

* Pinpoint the neurovascular bundles between the external and internal oblique muscle and follow their course into the rectus sheath

**Station 3: Inguinal rings and inguinal canal (cadaver)**

* Locate the superficial and deep inguinal rings.

* Demonstrate the surface anatomy of both rings
*Pinpoint the relation of the deep inguinal ring to the inferior epigastric artery.

*show how the inguinal canal is an oblique passage passing between both rings.

*Demonstrate the structures forming each of the boundaries of the inguinal canal; anterior wall, posterior wall, roof and floor.

*Show the contents of the inguinal canal; spermatic cord (round ligament of the uterus) and ilioinguinal nerve.

Station 4: same as [74] but on a model

Station 5: Testis, epididymis (cadaver)

*Show the coverings of the testis.

* Demonstrate how to differentiate between right and left testes.

*Show the different parts of the epididymis (head, body and tail).

* Locate the vas deferens in the spermatic cord and let the student feel its cord like structure.

Station 6: Spermatic cord

* Show the coverings of the spermatic cord.

*Identify its constituents.

Station 7: Lumbar vertebra (Bone):
*Recognize the difference between lumbar, thoracic and cervical vertebrae.

*Identify the different parts of the lumbar vertebra.

*Identify the special features of the fifth lumbar vertebra.

*Pinpoint the attachments of the psoas major and quadratus lumborum muscle.

*Locate the attachments of the ligaments between adjacent vertebrae.

*Locate the attachments of the three layers of lumbar fascia.

Station 8: Posterior abdominal wall (cadaver):

*Demonstrate the psoas major muscle and psoas minor muscle.

*Demonstrate the psoas fascia

*Demonstrate the quadratus lumborum muscle.

*Demonstrate the iliacus muscle.

*Show the relations of the branches of the lumbar plexus to the different aspects of psoas major muscle.

Station 9: Stomach (cadaver and diagram)

a) Identify the general arrangement of the peritoneum into greater and lesser sacs.

b) Identify the attachments of the lesser and greater omenta.
c) Show the location and boundaries of the opening into the lesser sac (epiploic foramen.
d) Identify the position of the stomach (left hypochondrium, epigastrium and umbilical regions.
e) Show different parts of the stomach; two orifices (cardiac and pyloric), two surfaces (anterior and posterior) and to borders (greater and lesser curvatures.
f) Recognize the characteristics of the pylorus; annular groove, and thickening.

**Station 10: Spleen (cadaver):**

a) Identify the position of the spleen (left hypochondrium; its long axis in line with the tenth rib)
b) Hold the spleen with the left hand and show its anterior (lateral) end, posterior (medial) end, upper notched border, lower border, diaphragmatic surface, visceral surface and hilum.
c) Identify the impressions on the visceral surface of the spleen (gastric, renal and colic)

**Station 11: Small intestine:**

*Identify the duodenum, jejunum and ileum

*Identify the four parts of the duodenum.

*Show the main relations of the duodenum to the surrounding structures

*Demonstrate how to differentiate between the jejunum and ileum.
**Station 12: Large intestine**

*Locate the different parts of the large intestine.*

*Identify the attachments of the transverse mesocolon and the sigmoid colon*

*If possible pinpoint the vermiform appendix and show its different positions*

*Identify how to define the surface anatomy of the Mcburney’s point.

**Station 13: Coeliac trunk**

a) Identify the origin of the coeliac trunk from the front of abdominal aorta
b) Identify its three branches; left gastric, hepatic and splenic arteries.
c) Show the course of the left gastric artery along the lesser curvature of the stomach.
d) Show the hepatic artery as it passes at first forward and to the right (common hepatic a.) then, how it ascends in the free margin of the lesser omentum as hepatic artery proper after giving the gastroduodenal artery. Recognize its relations to the bile duct and the portal vein.
e) Identify the course of the gastroduodenal artery behind the first part of duodenum and how it terminates by dividing into right gastroepiploic and superior pancreaticoduodenal as.
f) Identify the sinuous course of the splenic artery along the upper border of the body of pancreas.
Station 14: Superior and inferior mesenteric arteries

a) Identify origin of the superior mesenteric artery from the front of the abdominal aorta just below the coeliac trunk.

b) Follow its curved (concavity to the right) course in the root of mesentery and identify the structures that it crosses till it terminates in the right iliac fossa by anastomosing with a branch of the ileocolic artery.

c) Identify the main branches of the superior mesenteric artery; inferior pancreatico duodenal, jejunal and ileal, ileocolic, right colic and middle colic as.

d) Locate the origin of the inferior mesenteric artery from the abdominal aorta behind the third part of the duodenum.

e) Follow its course till it crosses the middle of the left common iliac artery to continue as the superior rectal artery.

f) Identify its branches; superior left colic, inferior left colic and superior rectal as.

Station 15: Liver:

a) Identify the position of the liver.

b) Show how to divide the liver into anatomically right and left lobes; attachment of falciform lig., fissure for ligamentum teres and fissure for ligamentum venosum. Then describe the caudate and quadrate lobes.

c) Describe the shape, surfaces and border of the liver.

d) Locate the impressions on the inferior surface of the liver and identify their related structures.
e) Demonstrate the three main parts of the posterior surface; bare area, groove for inferior vena cava and caudate lobe.

**Station 16: Porta hepatis and Biliary system**

a) Demonstrate the position of the hepatic artery hepatic ducts and portal vein in the porta hepatis.
b) Identify the different parts of the gall bladder.
c) Show the surface anatomy of the fundus of the gall bladder.
d) Locate the cystic duct and show the different components of the biliary system.
e) Demonstrate the termination of the common bile duct

**Station 17: Portal system of veins**

a) Identify the origin of the portal vein by the union of the splenic and superior mesenteric veins behind the neck of the pancreas.
b) Identify it the relations of the portal veins to the hepatic artery and common bile ducts and inferior vena cava.
c) Show the termination of the portal vein into the porta hepatis.
d) Demonstrate the splenic vein behind the body of pancreas.
e) Locate the superior mesenteric vein on the right side of the superior mesenteric artery.
f) Locate the inferior mesenteric vein on the left side of inferior mesenteric artery.
Station 18: Pancreas (cadaver/Diagram)

- Identify the position of the pancreas in epigastrium and left hypochondrium.
- Identify the 4 parts of the pancreas; head, neck, body and tail.
- Show the relations of the head of the pancreas to the bile duct posteriorly.
- Show the relations of the neck of the pancreas; anteriorly to the gastroduodenal artery and posteriorly to the formation of the portal vein.
- Demonstrate the renal and splenic veins behind the body of pancreas and the splenic artery along its upper border.
- Locate the superior mesenteric artery first behind the body then in front of the uncinate process.

Station 19: Kidney and ureter (cadaver)

- Demonstrate the poles, surfaces and borders of the kidney.
- Identify the arrangement of structures in the hilum of the kidney.
- Show how to identify the side of the kidney.
- Demonstrate posterior relations of each kidney.
- Demonstrate the anterior relations of the right and left kidneys.
- Locate the ureter on the psoas major muscle, and show how it enters the pelvis by crossing the end of the corresponding common iliac artery.
Station 20: Aorta and inferior vena cava

- Locate the beginning, termination and branches of abdominal aorta.
- Locate the beginning termination and tributaries of inferior vena cava.
- Demonstrate the anterior relations of the right and left kidneys.
- Locate the ureter on the psoas major muscle, and show how it enters the pelvis by crossing the end of the corresponding common iliac artery.
IV-Pelvis and perineum

Station 1: Bony pelvis

a) Demonstrate the bones forming the bony pelvis.

b) Show the articulation between the bones forming the bony pelvis.

c) Demonstrate the normal position of the pelvis in erect posture.

d) Identify the bony structures sharing in the formation of the pelvic inlet (pelvic brim).

e) Show how the pelvis is divided into 2 parts; greater and lesser pelvis by the plane of the pelvic brim.

f) Identify the bony structures sharing in the formation of the rhomboid-shaped pelvic outlet.

g) Give an idea about what is meant by pelvic diameters (anteroposterior, oblique and transverse) for both inlet and outlet.

h) Identify the different components of the sacrum.

Station 2: Pelvic peritoneum and viscera (Cadaver + Picture)

a) Demonstrate the arrangement of the pelvic viscera in male.

b) Show the rectovesical pouch, the pararectal and paravesical fossae in male.

c) Demonstrate the arrangement of the pelvic viscera in female.

d) Identify the rectovaginal (rectouterine) and uterovesical (vesicouterine) pouches, the pararectal and paravesical fossae.
Station 3: Attachments of muscles on bones

- Locate the bony attachments of piriformis, obturator internus and levator ani muscles.

Station 4: pelvic muscles

a) Show the piriformis muscle on the posterior aspect of pelvic cavity.
b) Show the obturator internus on the side wall of the pelvis and locate the white line.
c) Demonstrate different parts of levator ani muscle.

Station 5: Pelvic vessels

a) Demonstrate the division of common iliac artery into ext. & int. iliac arteries
b) Show the termination of the internal iliac artery into ant. and post. divisions at the upper margin of the greater sciatic foramen.
c) Demonstrate the branches of each division.
d) Locate the superior rectal artery
e) Locate the median sacral artery
f) Identify the internal iliac vein posterosuperior to the internal iliac a.
g) Show the formation of the common iliac vein on each side by the union of internal iliac and external iliac veins.
Station 6: Pelvic nerves

a) Demonstrate the lumbosacral trunk.

b) Demonstrate the obturator nerve as it passes into the obturator foramen.

c) Show the position of the sacral plexus.

d) Identify on a diagram the branches of the sacral plexus.

Station 7: Rectum

a) Locate the rectum on the posterior part of the pelvic cavity.

b) Show the beginning of the rectum as a continuation of the sigmoid colon at the middle of the sacrum (S3).

c) Demonstrate end of the rectum at the rectoanal junction one inch in front and below the tip of coccyx.

d) Show that the rectum is devoid of appendices epiploicae, taeniae coli and sacculations.

e) Show the lateral flexures of the rectum.

f) Revise the peritoneum covering of the rectum.

Station 8: Urinary bladder (Cadaver + Picture)

a) Locate the urinary bladder at the anteroinferior part of the pelvic cavity.

b) Show that the bladder is a 3 sided pyramid with an apex, a base and 3 surfaces.

c) Revise the peritoneum covering of the urinary bladder.

d) Locate on its posterior surface (base), the seminal vesicles and vas deferens in the male and the vagina in the female.
e) Show the ureters opening into the superolateral angles of the base.
f) Appreciate the relation of the neck of the bladder to the prostate in male and urethra in female.
g) Show the trigone on the interior of the urinary bladder lying between the openings of the ureters and internal urethral meatus.
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