

DATTA MEGHE INSTITUTE OF MEDICAL SCIENCES

SYLLABUS FOR – Ph.D. ANATOMY

I. Preamble:

The Ph.D. scholar of today are the teachers and researchers of tomorrow. They are vital for human resource development and health care program. Therefore redefined , need based curriculum should be followed to develop good scientific component and clinical competence. In the present curriculum there is more stress on learning, further it generates initiative and grip amongst students for excelling in their studies..

The following ingredients are incorporated in the syllabus of Ph.D. studies in anatomy, to achieve a wide range of professional and personal skills.

1. Adequate time for planning and workout of independent experimental/practical work.
2. Fundamental aspects of laboratory work
3. Familiarity with different teaching aids.
4. Correlation between anatomical knowledge and interpretation of data obtained from different modern diagnostic tools.
5. The knowledge and training of modern accessible educational technology.

II. Goals and Objectives:

The broad goal of the Anatomy teaching to Ph.D. students is to provide comprehensive knowledge of the gross, microscopic structure, Genetics and development of human body. This is essential as a basis for making an exemplary teacher. To achieve this goal, the Ph.D. student in Anatomy should be given an overall exposure to the subject, teaching methodologies and research technologies.

To achieve this goal, the following objectives must be fulfilled.

a. Programme objectives [Cognitive domain]:

At the end of three years of Ph.D, the scholar should be able to:

1. Be a competent Anatomist
2. Teach the undergraduate student gross anatomy, microanatomy, developmental aspects of human body, neuroanatomy, radiological anatomy and sectional anatomy, surface and living anatomy.
3. Explain various aspects of genetics and describe genetic basis of disorders and principles of genetics counselling.
4. Explain the general principles of Anatomy Act and Transplant of Human Organ Act & process of embalming.
5. Comprehend horizontal integration of various subdivisions of anatomy with relevant physiology and biochemistry.
6. Design GROSS Anatomy and Histology laboratories for undergraduate and Ph.D. studies.
7. Plan research programme.

b. Learning objectives (Psychomotor domain):

At the end of the training, the scholar should be able to:

1. Dissect and demonstrate various parts of adult human body.
2. Demonstrate surface landmarks and living anatomy pertaining to muscle power, testing of nerves and palpating vessels.
3. Dissect and demonstrate various parts of a Fetus.
4. Embalm the cadaver whenever available.
5. Prepare tissue blocks; perform H &E staining and special staining.
6. Prepare and deliver lectures on various topics of human anatomy using audiovisual aids.
7. Operate computers so as to prepare documents, tables, charts and projection slides.
8. Identify research topics; carry out research and prepare a dissertation on a topic.
9. Present paper/poster in conferences.
10. Set undergraduate theory question paper, evaluate students and able to compute results including internal assessment marks.

c. Personality development (Affective domain):

At the end training the scholar should be able to

1. Co-operate with and react and respond in a cordial manner in his / her interaction with peers, superiors and subordinates.
2. Project a cheerful persona to the students.
3. Inspire the students to reach greater height to excel.
4. Arouse an element of curiosity and wonder in the minds of students.
5. Develop a healthy personality and liking as well as respect for the subject.

SYLLABUS FOR Ph.D. ANATOMY

GENERAL AND GROSS ANATOMY

Bones, joints, Muscles Connective tissue, Lymphatic and cardiovascular, Nervous system, Skin and fascia

SUPEX

Mammary gland, Axilla, Brachial plexus, Cubital fossa, Shoulder joint, Elbow joint, Wrist Joint, Fascial spaces of hand, Radiocarpal joint.

INFEX

Femoral triangle, Adductor canal, Gluteal region, popliteal fossa, Arches of foot, Hip joint , Knee joint, Ankle joint.

THORAX

Pleura and lung, Pericardium, Heart, Blood supply of heart, Mediastim, Azygous system of vein.

ABDOMEN

Inguinal canal, Male exretnal genitalia, Peritoneum, Stomach, Small and large intestine, Aorta and its branches, Extrahepatic biliary apparatus, caecum and appendix, Rectum and anal canal, spleen , liver, kidney, ureter, urinary bladder, urethra, Suprarenal gland, Diaphragm, Perinuem, Ischiorectal fossa, Ptrostate, Uterus and vagina, Ovaries.

HEAD , NECK AND FACE

Scaip, side of neck, cranial cavity and dural venous sinuses, orbit, parotid region, infratemporal region, muscles of mastication and mandibular nerve, temporomandibular joint, facial nerve, submandibular gland, thyroid gland, tongue, pharynx and palate, palatine tonsil, paranasal sinusea, larynx, eyeball,cranial nerves.

NEUROANATOMY

Meninges and CSF, Blood vessels of brain, spinal cord, cerebrum , cerebellum, brain stem, ventricles of brain, basal nuclei, reticular formation, thalamus , hypothalamus, limbic system, autonomic nervous system

HISTOLOGY & HISTOCHEMISTRY

Cell, Epithelium, connective tissue, glands , musle, bone, nervous tissue, lymphatic system, cardiovascular system, skin, respiratory system, salivary glands, oesophagus, stomach, small intestine & large intestine, liver, pancreas & appendix, kidney, ureter, urinary bladder, urethra, male genital system, female genital system, endocrine system, cerebrum and cerebellum, cornea, retina

EMBRYOLOGY

Gametogenesis, menstrual cycle, formation of germ layers, development of embryonic disc, somites, placenta and foetal membranes, pharyngeal arches and pouches, development of face, nose and palate, mouth, pharynx, development of gut, development of liver, spleen, pancreas, development of respiratory system, development of cardiovascular system, development of urogenital system, development of nervous system, development of eye, ear and congenital malformations

GENETICS

Chromosomes and chromosomal aberrations, karyotyping, cell division, Single gene pattern inheritance, Multifactorial pattern of inheritance, Reproduction genetics

LIST OF RECOMMENDED BOOKS

I. Textbooks:

1. Cunningham's Manual of Practical Anatomy – Latest editions of vol. I, II, III
2. Regional & Applied Anatomy – R. J. Last
3. Clinical Anatomy for Medical Students – Richard Snell
4. Synopsis of Surgical Anatomy – McGregor
5. Functional Histology – Wherter, Burkit
6. Langman's Medical Embryology
7. Embryology by Keith Moore
8. Clinical Neuroanatomy – Snell
9. The Human Nervous System – Murray Barr, John Keiman
10. Genetics by Emery
11. Human Genetics – S.D. Gangane
12. Essential of HUMAN Genetics by Bhatnagar, Kothari and Mehta
13. Cross-sectional anatomy by Bo, Meehan and Kruger
14. Principles of General anatomy by A.K. Dutta
15. Comparative anatomy A.S. Romer

II. Reference Books:

1. Gray's Anatomy
2. Clinical Anatomy – NMS Series
3. Anatomy for Surgeons - Henry Hollinshead
4. Surgical Anatomy – Harold Ellis
5. Bailey's Textbook of Microscopic Anatomy
6. Embryology - Boyd & Mossman
7. Clinically oriented anatomy – Keith Moore
8. Atlas of Human Histology – Di fiore
9. Tissues of the Human Body by Le Gros Clerk
10. Genetics by Thompson and Thompson
11. History of Anatomy Indian Medicine – Kutumbiah
12. Dorlands Medical Dictionary

III. Journals:

1. Journal of Clinical Anatomy
2. Surgical & Radiological Anatomy
3. Journal of Anatomy
4. Development Dynamics
5. Anatomical Record
6. Journal of Anatomical Society of India
7. Trends in Genetics
8. Indian journal of Anthropology & Human Genetics
9. Indian journal of Genetics
10. Prospective in cytology & Genetics

