Syllabus for MD (Anatomy) Programme

Guru Gobind Singh Indraprastha University

A State University established by the Govt. of NCT of Delhi

University School of Medicine and Allied Health Sciences

THE OFFICE OF THE DEAN

SCHOOL OF MEDICINE AND PARA MEDICAL HEALTH SCIENCES

GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY, DELHI.

Sub. Approval of the syllabus for Diploma, MD, MS, DM, M.Ch. under the GGS IP University, Delhi by BOS.

Dear Sir/ Madam,

The Board of Studies of GGS IP University, Delhi has been constituted as per Clause 4 & 5 (since the University does not have their own school of the Medicine) by the honorable Vice chancellor. You are nominated as one of the Members of the Sub Committees as per subject wise (Anatomy). The Members of the BOS and the Sub Committees shall held office for a term of two years. The subject Sub Committees will to assist BOS in various academic affairs.

I am herewith sending the provisional syllabus of your subject framed from MCI syllabus. You are requested to go through the syllabus and give your comments for final approval by the BOS. It is also requested to send your E-mail address for future correspondence.

With kind regards.

BOS Sub Committee Members (Anatomy)

1. Dr. R.K. Suri. Prof. Anatomy, VMMC and Safdarjag Hospital.
2. Dr. Vanita Gupta Lecture, VMMC And Safdarjag Hospital.
3. Dr. Col. B.K. Mishra Prof. Anatomy, AMHS.

(Prof. H.K. KAR)

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To
The Dean,
School of Medicine and Para Medical Health Sciences
Guru Gobind Singh Indraprastha University
Delhi.

Sub: Approval of the syllabus for Diploma, MD. MS, DM, M.CH. under the GGS IP University, Delhi by BOS.

Sir

Please refer to you letter No. DO/OD/BOS/27 Dated: 01.04.10 on the above mentioned subject.

The sub committee on Anatomy had an extensive discussion and recommended the syllabus for MD (Anatomy).

The recommended syllabus is enclosed for final approval of BOS.

Thanking You

31/5/10

Dr. R.K. Suri
Professor
Deptt of Anatomy
VMMC, Safdarjang Hospital
New Delhi

Dr. Col. B.K. Mishra
Professor
31 May 10
Professor of Anatomy
ACMS, Delh. Cantt.

Dr. Vanita Gupta
Assoc. Professor (on vacation)
Deptt of
Anatomy
VMMC
Safdarjang Hospital
New Delhi

Dean

MD Anatomy

Practical Objective

A Candidate upon successfully qualifying in the M.D (Anatomy) examinations should be able to :

1. Be a competent Anatomist.
2. Teach the undergraduate student gross anatomy, radiological anatomy, embryology, histology, Neuroanatomy and elementary genetics.
3. Assess the student's understanding of the anatomical sciences.
4. Assess the undergraduate programmes.
5. Plan and modify the undergraduate curriculum.
6. Prepare the tissues for light microscopic study.
7. Enumerate the types of microscope, their uses and their principies including electron microscope. Take care of maintenance of microscope.
8. Embalm a cadaver.
9. Design gross Anatomy and histology laboratories for teaching undergraduate and postgraduate students of Anatomy.
10. Plan and implement research programme.
11. Undertake histomorphometric studies.

Specific learning Objectives

(a) Effectively teach undergraduate medical students the basic Anatomical mechanisms of human body, with reference to their implications in the pathogenesis of diseases and their management.
(b) Conduct such clinical and experimental research, as would have a significant bearing on human health and patient care.
(c) Encourage interaction with the allied departments by rendering services in advanced laboratory investigations and relevant expert opinion.
(d) Encourage the student to participate is various workshops/seminars/journal clubs/demonstration in the allied departments, to acquire various skills for collaborative research.
(e) Uphold the prestige of the discipline amongst the fraternity of doctors.

Departmental Resources

It be mandatory for the department to develop at least 3 of the following laboratories. In addition to the facilities, the laboratory should be involved in active research in one or more well defined fields.

- Cytogenetics
- Histochemistry
- Immunology
- Electron microscopy
- Developmental anatomy
- Anthropometry
- Neuroanatomical techniques
- *Imaging technique* for radiological Anatomy

Post Graduate Training

Based on the available facilities, department can prepare a list of postgraduate experiments pertaining to basic and applied Anatomy. Active learning should from the mainstay of postgraduate training there should be lectures for postgraduates (at least 20 per year) along with seminars, symposia, group-discussion, Journal clubs.
They will carry out dissection of the whole body.
The dissertation/thesis will be submitted within two years
There will be periodic/time bound (formative and summative) assesment

PAPERS (Theory)

1 Gross Anatomy including General Anatomy
2 Embryology, genetics and histology
3 Neuroanatomy
4 Applied anatomy including radiological anatomy and Recent Advances

Practical (A candidate in order to pass must secure not less than 50% marks in each head of passing i.e. 1-theory, and 2- practical including clinical and viva voce.)

Should be spread over two days.

First Day

(a) : Gross Anatomy Dissection
(b) : Histology
Spotting (10 spots)
Techniques-section cutting from one block
Staining one paraffin section

Second Day

(a) Microteaching
(b) Viva on dissertation and research methodology
(c) Grand viva including Embryology, Radiological Anatomy Surface Anatomy, Living Anatomy and case/problem solving

Course Content

PAPER I
General Anatomy

- Tissues of the body;
- General osteology
- Arthrology
- Muscle & fascia,
- Nervous system,
- Principles governing arterial, Venous and lymphatic pathways
- Innervation of blood vessels.

Gross anatomy

- Detailed gross anatomy of the human body, including cross sectional anatomy. Anatomical basis of clinical conditions.
- Embalming and museum techniques

PAPER II

Embryology

- General embryology
- Special embryology of all the systems of the body including variations and congenital anomalies.

Genetics

- Structure of chromosomes,
- Structure of gene.
- Karyotype,
- Chromosomal aberrations,
- Inheritance,
- Basic Molecular genetics,
- Common Genetic disorders

Evolution of organ systems of human body-

- Teeth
- Heart
- Kidney
- Brain
- lungs

Histology

- Histological Techniques:
- Microscopes- All Types
- Care and maintenance of light microscope.
- General histology,
- Special histology of the systems of the body including their electron microscopic appearance.

PAPER III

Neuroanatomy

- Structural organization of various parts of the nervous system with particular reference to their connections and function.
- Localization & effects of lesions in different parts of the central nervous system and nerve injuries.
- Neuroanatomical techniques for demonstration of Nissl substance, processes, myelin sheath

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Paper IV

Applied Anatomy including Radio Anatomy and recent advances

a) Clinical aspects of Human anatomy including surgical approaches to various structures and organs
b) Principles of Newer Imaging Techniques
c) Determination of age, sex, stature and race from skeletal remains.
d) Determination of age of a living individual.
e) Theoretical aspects of examination of hair and nail including differences between human and animal hairs.
f) Application of anatomical knowledge to fertility control
g) Immunological basic of tissue typing and organ transplant
h) Sectional Anatomy
i) Principles involved in plain radiography, special investigative procedures and newer imaging techniques such as ultrasounds, CT- scans, MRI, PET etc. Principles and Interpretation of CT Scan, Sono Graphy and MRI plain radiographs
j) Surface anatomy
k) Principles of physical Anthropology
l) Museum Techniques,
m) Embalming Techniques including medico-legal aspects.

Recommended Reading

- Medical Embryology – Jan Langman
- Human Embryology – Inderbir Singh
- Genetics in Medicine – J.S Thompson & M.W. Thompson
- Research how to plan, speak & write about it – C. Hawkins & M. Sorgi
- How to write & Publish a scientific paper – R.A Day
- Human Embryology – W.J. Hamilton & H.W. Mossman
- An introduction to Biostatistics. A manual for students in health sciences – P.S.S Sunder Rao
- Gray's Anatomy
- Anatomy- Regional& applied –R.J. Last
- Clinical Neuroanatomy – Snell
- Anatomy for Surgeon – W.H. Hollinshead Vol. I,II.III
- Tissues of the body _ lee Gross Clark
- Human Nervous System _ Ellis
- A synopsis of surgical anatomy – D.J. Du Plesis
- Frazer's Osteology
- Text book of Histology – Bloom & Fawcett
- Carlton's histological technique – Drury R.A.B., Wallington E.A.
- Hams Histology
- Vertebrates:Comparative Anatomy, Function, Evolution by Kenneth V Kardong McGraw Hill

Journals

- Journal of Anatomical Society of India
- Journal of Anatomy, London
- Anatomical Record
- American journal of anatomy
- Clinical Anatomy
- Anatomical adjuncts
- Cell, Tissues & Organs (Formerly Acta Anatomica)