



PARAMEDICAL COUNCIL OF INDIA

PG DIPLOMA IN ULTRASOUND & SONOGRAPHY

SYLLABUS

Ch. No.157/1, Near Laxmi Nagar, Metro Station Gate No 1, Vikas Marg, Delhi-92

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COURSE DURATION:-

- It is 1 years + 6 months internship full time PG Diploma Course

ELIGIBILITY:-

- Candidate must have passed bachelor's degree in a field from a recognized university or board with minimum aggregate of 50%
- There is no maximum age limit for the admission.

ONE YEAR

- 1) ANATOMY & PHYSIOLOGY
- 2) BASIC PHYSICS & INSTRUMENT
- 3) EMBRYOLOGY & PATHOLOGY, FETAL ENVIRONMENT & DOPPLER
- 4) MEDICAL & SURGICAL ULTRASOUND
- 5) OBSTETRICAL & GYNECOLOGICAL ULTRASOUND

SYLLABUS COVERS

1. ANATOMY & PHYSIOLOGY

- 1.Introduction to Anatomy.
- 2.Anatomical terms, planes.
- 3.Organization of Human body cell, tissue, organ system.
- 4.Muscular Skeletal System.
- 5.Bones – Types, structure, division of skeletal system, names of bones, parts, joints & classifications.
- 6.Muscles – structure and types.
- 7.Anatomy of Nervous System.
- 8.Anatomy of Circulatory system, General system of circulation, Heart, General plane circulation (Systemic, pulmonary, portal), Name of arteries/veins.
- 9.Lymphatic System.
10. Anatomy of Respiratory System.
11. Anatomy of Digestive System.

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12. Accessory glands of Digestion (Liver, Gall Bladder, Pancreas).
13. Excretory System – Kidney, Gross Structure, Excretory ducts, Ureter, Urinary Bladder, Urethra Respiratory system.
14. Endocrine glands, Position, Hormones and function, pituitary, Thyroid, Parathyroid, Adrenal glands.

2. BASIC PHYSICS & INSTRUMENT

1. Introduction.
2. Prerequisites.
3. Mathematics.
4. Physics.
5. Biology.
6. Ultrasonography.
7. Basic sciences.
8. Equipment.
9. Quality assurance.
10. Equipment management.
11. Artefacts.

3. EMBRYOLOGY & PATHOLOGY, FETAL ENVIRONMENT & DOPPLER

1. Embryology Definition & Meaning.
2. Stages of Embryo Development.
3. Definition of fetal.
4. Cycle of pregnancy.
5. Stages of natural fertilization.
6. Placenta Definition & Meaning.
7. Embryo-pathology method.
8. Chromosomal abnormalities.

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9. Malformation syndromes.
10. Dysplasias.
11. Intrauterine growth retardation.
12. Fetalhydrops and cystic hygroma.
13. Central nervous system defects.
14. Craniofacial defects.
15. Skeletal abnormalities.
16. Cardiovascular system defects.
17. Respiratory system.

4. MEDICAL & SURGICAL ULTRASOUND

1. Introduction.
2. A definition of a medical & surgical ultrasound.
3. Limitation of practice.
4. Curriculum for general (level I) medical & surgical ultrasound.
5. Principles of scanning.

5. OBSTETRICAL & GYNECOLOGICAL ULTRASOUND

1. Purpose.
2. Prerequisites.
3. General and specialized training.
4. Curriculum.
5. Duration of training and required number of studies.
6. Clinical and ancillary information.
7. Requirements for teachers of sonographers.
8. Evaluation.
9. Continuing medical education.
10. Specialized training.

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1. Physics of Ultrasonography and machine settings.
2. Counseling of patient before Ultrasound and form filling.
3. Basics of Early Pregnancy ultrasound and Dating at 8-10 weeks scan.
4. Multiple pregnancy.
5. Pregnancy of uncertain viability and Pregnancy of unknown Location.
6. Nuchal translucency and Basic anomaly screening.
7. Fetal biometry and evaluation as per growth charts.
8. Liquor Assessment and Placental evaluation.
9. Cervical Assessment for Preterm Labour and induction of labour.
10. Basic Doppler Assessment and progressive Doppler monitoring.
11. Basics of Gynec Scans: Uterus, Ovaries, Adenexa.
12. Ultrasound in Infertility & Follicular Study.
13. How to do reporting after a scan and doubt session.

BOOK

1. **LAB TECH ANATOMY AND PHYSIOLOGY - BY DR. N. MURGESH**
2. **LAB TECH COMMUNITY HEALTH - BY DR. N. MURGESH**
3. **LAB TECH GENERAL BIOCHEMISTRY - BY DR. DINESH KUMAR SHUKLA,
DR. N. MURGESH**
4. **LAB TECH CLINICAL BIOCHEMISTRY - BY DR. DINESH KUMAR SHUKLA,
DR. N. MURGESH**
5. **LAB TECH CLINICAL PATHOLOGY - BY DR. N. MURGESH**
6. **LAB TECH HISTOPATHOLOGY & CYTOPATHOLOGY -
BY DR. DINESH KUMAR SHUKLA, DR. N. MURGESH**
7. **LAB TECH HAEMATOLOGY - BY DR. DINESH KUMAR SHUKLA, DR. N. MURGESH**
8. **LAB TECH BLOOD BANKING - BY DR. N. MURGESH**
9. **LAB TECH MICROBIOLOGY I - BY DR. DINESH KUMAR SHUKLA, DR. N. MURGESH**
10. **LAB TECH MICROBIOLOGY II - BY DR. DINESH KUMAR SHUKLA, DR. N. MURGESH**