

DENTAL SCIENCES • SPECIALIST TRAINING



NTHRYS

OPC PVT LTD

DENTAL SCIENCES • FELLOWSHIP TRAINING PROGRAMS

Physiology & Biochemistry

The complete physiology and biochemistry foundation for dental graduates and postgraduates — spanning cell, blood, cardiovascular, respiratory, renal, GI, endocrine, nerve-muscle, CNS and special-sense physiology, oral physiology and orofacial pain, the full metabolism of carbohydrates, lipids, proteins and nucleic acids, enzymes and bioenergetics, mineralised-tissue, salivary and calcium biochemistry, and clinical, molecular and omics-driven diagnostics. Every module is delivered through structured laboratory and applied-science teaching.

33

SUB-STREAMS

135

PROTOCOLS

892

HOURS

2026

EDITION

Sub-Streams at a Glance

This catalogue lists every Physiology & Biochemistry training protocol delivered at the NTHRYS Dental Sciences centre, organised under the **PB** department across 33 specialist sub-streams. Each protocol carries a unique code, a defined duration and a per-protocol fee, and may be combined into custom fellowship tracks. Protocols are pitched at practising specialists, postgraduates and digital-laboratory technologists.

STREAM	SUB-STREAM	FOCUS	N	HRS	VALUE
NDS-PB-CE	Cell Physiology & Homeostasis	Cell function and body fluids	4	23	₹ 36,500
NDS-PB-BL	Blood & Body Fluids	Haematology physiology	5	31	₹ 52,000
NDS-PB-CV	Cardiovascular Physiology	Heart and circulation	4	27	₹ 48,500
NDS-PB-RS	Respiratory Physiology	Ventilation and gas exchange	4	25	₹ 42,000
NDS-PB-RN	Renal Physiology	Kidney function and balance	4	26	₹ 44,000
NDS-PB-GI	Gastrointestinal Physiology	Digestion and absorption	4	26	₹ 44,000
NDS-PB-EN	Endocrine Physiology	Hormonal regulation	4	28	₹ 50,000
NDS-PB-NP	Nerve & Muscle Physiology	Excitable-tissue function	4	27	₹ 48,500
NDS-PB-CN	Central Nervous System Physiology	Brain and pathways	4	27	₹ 48,500
NDS-PB-SP	Special Senses Physiology	Vision, hearing, taste and smell	4	24	₹ 38,000
NDS-PB-RP	Reproductive Physiology	Reproductive systems	4	22	₹ 33,000
NDS-PB-OR	Oral Physiology	Mastication, salivation and taste	5	33	₹ 63,500
NDS-PB-PN	Pain & Orofacial Neurophysiology	Nociception and modulation	4	28	₹ 53,500
NDS-PB-TM	Temperature & Metabolic Regulation	Thermoregulation and BMR	4	23	₹ 36,500
NDS-PB-EX	Exercise & Environmental Physiology	Adaptation and stress	4	23	₹ 34,500
NDS-PB-BC	Cell & Molecular Biochemistry	Biomolecules and membranes	4	24	₹ 40,000
NDS-PB-CH	Carbohydrate Metabolism	Glycolysis and glucose homeostasis	5	34	₹ 61,500

Sub-Streams at a Glance *continued*

STREAM	SUB-STREAM	FOCUS	N	HRS	VALUE
NDS-PB-LP	Lipid Metabolism	Fatty-acid and cholesterol biochemistry	4	27	₹ 49,000
NDS-PB-PR	Protein & Amino-Acid Metabolism	Nitrogen metabolism	4	27	₹ 49,000
NDS-PB-NA	Nucleic Acid & Molecular Biology	Gene structure and expression	4	30	₹ 57,000
NDS-PB-EZ	Enzymes & Coenzymes	Catalysis and clinical enzymology	4	26	₹ 44,000
NDS-PB-BE	Bioenergetics & Biological Oxidation	Energy metabolism	4	27	₹ 45,500
NDS-PB-VM	Vitamins & Minerals	Micronutrient biochemistry	4	24	₹ 38,000
NDS-PB-HM	Hormone Biochemistry	Signalling and hormone action	4	26	₹ 44,000
NDS-PB-IN	Integration of Metabolism	Metabolic coordination	4	26	₹ 44,000
NDS-PB-CT	Connective & Mineralised-Tissue Biochemistry	Matrix and hard-tissue chemistry	4	28	₹ 53,500
NDS-PB-SA	Saliva & Oral-Fluid Biochemistry	Salivary and caries chemistry	4	27	₹ 52,000
NDS-PB-CB	Calcium, Phosphate & Bone Biochemistry	Mineral homeostasis	4	27	₹ 52,000
NDS-PB-IM	Immunochemistry & Molecular Immunology	Immune biochemistry	4	27	₹ 52,000
NDS-PB-NB	Nutrition Biochemistry	Nutrient metabolism and assessment	4	23	₹ 36,500
NDS-PB-LB	Clinical & Laboratory Biochemistry	Diagnostic biochemistry	4	29	₹ 64,000
NDS-PB-MO	Molecular Biology & Genomics	Molecular techniques and diagnostics	4	32	₹ 90,000
NDS-PB-OM	Omics, AI & Computational Physiology	Systems and precision biology	4	35	₹ 1,12,500
Full department — 33 sub-streams			135	892	₹ 16,57,500

How the Programme is Built

Fees are tiered by clinical and technological complexity — from advanced core restorative protocols through implant, maxillofacial, digital, robotic and bioengineered streams. Per-protocol fees range from ₹ 7,500 to ₹ 29,000, with the complete department representing ₹ 16,57,500 of specialist training across 892 hours.

HOW TO READ A CODE

NDS – PB – CE – 01

NDS

Nthrys Dental Sciences

PB

Physiology & Biochemistry dept

CE

Sub-stream

01

Protocol number

Every protocol is delivered hands-on on live clinical and digital-laboratory equipment, with structured assessment and case documentation. Sub-streams may be enrolled individually or bundled into themed fellowship pathways (e.g. *Full-Arch Implant, Digital & Robotic, Maxillofacial Rehabilitation*).

Cell Physiology & Homeostasis

Cell function and body fluids

4
PROTOCOLS

CODE	PROTOCOL	DESCRIPTION	DURATION	FEE (INR)
NDS-PB-CE-01	Cell Structure & Function	Cell-organelle physiology.	6 hrs	₹ 9,500
NDS-PB-CE-02	Membrane Transport	Diffusion, osmosis and active transport.	6 hrs	₹ 9,500
NDS-PB-CE-03	Homeostasis & Feedback	Regulatory-mechanism overview.	6 hrs	₹ 9,500
NDS-PB-CE-04	Body Fluid Compartments	Fluid-distribution physiology.	5 hrs	₹ 8,000

Blood & Body Fluids

Haematology physiology

CODE	PROTOCOL	DESCRIPTION	DURATION	FEE (INR)
NDS-PB-BL-01	Blood Composition & Plasma	Blood-component physiology.	6 hrs	₹ 10,000
NDS-PB-BL-02	Red Blood Cells & Anaemia	Erythrocyte physiology.	6 hrs	₹ 10,000
NDS-PB-BL-03	White Blood Cells & Immunity	Leukocyte physiology.	6 hrs	₹ 10,000
NDS-PB-BL-04	Haemostasis & Coagulation	Clotting-mechanism physiology.	7 hrs	₹ 12,000
NDS-PB-BL-05	Blood Groups & Transfusion	Grouping and compatibility.	6 hrs	₹ 10,000

Cardiovascular Physiology

Heart and circulation

4
PROTOCOLS

CODE	PROTOCOL	DESCRIPTION	DURATION	FEE (INR)
NDS-PB-CV-01	Cardiac Physiology	Heart-function fundamentals.	7 hrs	₹ 12,500
NDS-PB-CV-02	Cardiac Cycle & Output	Cycle and output regulation.	7 hrs	₹ 12,500
NDS-PB-CV-03	Blood-Pressure Regulation	BP-control mechanisms.	7 hrs	₹ 12,500
NDS-PB-CV-04	Circulation & Microcirculation	Vascular physiology.	6 hrs	₹ 11,000

Respiratory Physiology

Ventilation and gas exchange

CODE	PROTOCOL	DESCRIPTION	DURATION	FEE (INR)
NDS-PB-RS-01	Mechanics of Breathing	Ventilation physiology.	6 hrs	₹ 10,000
NDS-PB-RS-02	Gas Exchange & Transport	O2/CO2-transport physiology.	7 hrs	₹ 12,000
NDS-PB-RS-03	Respiratory Regulation	Breathing-control mechanisms.	6 hrs	₹ 10,000
NDS-PB-RS-04	Applied Respiratory Physiology	Clinical relevance.	6 hrs	₹ 10,000

Renal Physiology

Kidney function and balance

4
PROTOCOLS

CODE	PROTOCOL	DESCRIPTION	DURATION	FEE (INR)
NDS-PB-RN-01	Renal Structure & Function	Nephron physiology.	6 hrs	₹ 10,000
NDS-PB-RN-02	Glomerular Filtration	Filtration physiology.	7 hrs	₹ 12,000
NDS-PB-RN-03	Tubular Function & Concentration	Reabsorption and secretion.	6 hrs	₹ 10,000
NDS-PB-RN-04	Acid-Base & Fluid Balance	Homeostatic-renal role.	7 hrs	₹ 12,000

Gastrointestinal Physiology

Digestion and absorption

4
PROTOCOLS

CODE	PROTOCOL	DESCRIPTION	DURATION	FEE (INR)
NDS-PB-GI-01	GI Motility	Movement physiology.	6 hrs	₹ 10,000
NDS-PB-GI-02	Secretions of the GI Tract	Digestive-secretion physiology.	7 hrs	₹ 12,000
NDS-PB-GI-03	Digestion & Absorption	Nutrient-handling physiology.	7 hrs	₹ 12,000
NDS-PB-GI-04	GI Regulation	Hormonal and neural control.	6 hrs	₹ 10,000

Endocrine Physiology

Hormonal regulation

4
PROTOCOLS

CODE	PROTOCOL	DESCRIPTION	DURATION	FEE (INR)
NDS-PB-EN-01	Endocrine Principles	Hormone-action fundamentals.	7 hrs	₹ 12,500
NDS-PB-EN-02	Pituitary & Hypothalamus	Master-gland physiology.	7 hrs	₹ 12,500
NDS-PB-EN-03	Thyroid & Parathyroid	Metabolic and calcium hormones.	7 hrs	₹ 12,500
NDS-PB-EN-04	Adrenal & Pancreatic Hormones	Stress and glucose hormones.	7 hrs	₹ 12,500

Nerve & Muscle Physiology

Excitable-tissue function

4
PROTOCOLS

CODE	PROTOCOL	DESCRIPTION	DURATION	FEE (INR)
NDS-PB-NP-01	Nerve Physiology	Action-potential physiology.	7 hrs	₹ 12,500
NDS-PB-NP-02	Synaptic Transmission	Neurotransmission physiology.	7 hrs	₹ 12,500
NDS-PB-NP-03	Muscle Physiology	Contraction physiology.	7 hrs	₹ 12,500
NDS-PB-NP-04	Neuromuscular Junction	Junction-transmission physiology.	6 hrs	₹ 11,000

Central Nervous System Physiology

Brain and pathways

4
PROTOCOLS

CODE	PROTOCOL	DESCRIPTION	DURATION	FEE (INR)
NDS-PB-CN-01	CNS Organisation	Brain-function overview.	7 hrs	₹ 12,500
NDS-PB-CN-02	Sensory Systems	Ascending-pathway physiology.	7 hrs	₹ 12,500
NDS-PB-CN-03	Motor Systems	Descending-control physiology.	7 hrs	₹ 12,500
NDS-PB-CN-04	Higher Functions & Reflexes	Integration and reflexes.	6 hrs	₹ 11,000

Special Senses Physiology

Vision, hearing, taste and smell

4
PROTOCOLS

CODE	PROTOCOL	DESCRIPTION	DURATION	FEE (INR)
NDS-PB-SP-01	Vision Physiology	Visual-system physiology.	6 hrs	₹ 9,500
NDS-PB-SP-02	Hearing & Balance	Auditory and vestibular physiology.	6 hrs	₹ 9,500
NDS-PB-SP-03	Taste & Smell	Chemoreception physiology.	7 hrs	₹ 11,000
NDS-PB-SP-04	Special-Sense Integration	Sensory-integration.	5 hrs	₹ 8,000

Reproductive Physiology

Reproductive systems

4
PROTOCOLS

CODE	PROTOCOL	DESCRIPTION	DURATION	FEE (INR)
NDS-PB-RP-01	Male Reproductive Physiology	Male-system physiology.	5 hrs	₹ 7,500
NDS-PB-RP-02	Female Reproductive Physiology	Female-cycle physiology.	6 hrs	₹ 9,000
NDS-PB-RP-03	Pregnancy & Lactation	Gestation physiology.	6 hrs	₹ 9,000
NDS-PB-RP-04	Reproductive Endocrinology	Hormonal control.	5 hrs	₹ 7,500

Oral Physiology

Mastication, salivation and taste

5
PROTOCOLS

CODE	PROTOCOL	DESCRIPTION	DURATION	FEE (INR)
NDS-PB-OR-01	Physiology of Mastication	Chewing physiology.	7 hrs	₹ 13,500
NDS-PB-OR-02	Salivary Secretion Physiology	Saliva-production physiology.	7 hrs	₹ 13,500
NDS-PB-OR-03	Taste Physiology	Gustatory physiology.	7 hrs	₹ 13,500
NDS-PB-OR-04	Swallowing & Speech Physiology	Deglutition and phonation.	6 hrs	₹ 11,500
NDS-PB-OR-05	Physiology of Tooth & Pulp	Dental-tissue physiology.	6 hrs	₹ 11,500

Pain & Orofacial Neurophysiology

Nociception and modulation

4
PROTOCOLS

CODE	PROTOCOL	DESCRIPTION	DURATION	FEE (INR)
NDS-PB-PN-01	Pain Physiology	Nociception fundamentals.	7 hrs	₹ 13,500
NDS-PB-PN-02	Orofacial Pain Mechanisms	Trigeminal-pain physiology.	8 hrs	₹ 15,000
NDS-PB-PN-03	Pain Modulation & Pathways	Gate-control and modulation.	7 hrs	₹ 13,500
NDS-PB-PN-04	Referred & Chronic Pain	Pain-disorder physiology.	6 hrs	₹ 11,500

Temperature & Metabolic Regulation

Thermoregulation and BMR

4
PROTOCOLS

CODE	PROTOCOL	DESCRIPTION	DURATION	FEE (INR)
NDS-PBTM-01	Body-Temperature Regulation	Thermoregulation physiology.	6 hrs	₹ 9,500
NDS-PBTM-02	Metabolic Rate & BMR	Energy-metabolism physiology.	6 hrs	₹ 9,500
NDS-PBTM-03	Thermal Stress Responses	Heat and cold-response physiology.	6 hrs	₹ 9,500
NDS-PBTM-04	Applied Thermoregulation	Clinical relevance.	5 hrs	₹ 8,000

Exercise & Environmental Physiology

Adaptation and stress

4
PROTOCOLS

CODE	PROTOCOL	DESCRIPTION	DURATION	FEE (INR)
NDS-PB-EX-01	Exercise Physiology	Activity-response physiology.	6 hrs	₹ 9,000
NDS-PB-EX-02	Environmental Physiology	Altitude and pressure physiology.	6 hrs	₹ 9,000
NDS-PB-EX-03	Stress Physiology	Stress-response systems.	6 hrs	₹ 9,000
NDS-PB-EX-04	Adaptation Mechanisms	Physiologic-adaptation.	5 hrs	₹ 7,500

Cell & Molecular Biochemistry

Biomolecules and membranes

4
PROTOCOLS

CODE	PROTOCOL	DESCRIPTION	DURATION	FEE (INR)
NDS-PB-BC-01	Cell & Subcellular Biochemistry	Cellular-organisation chemistry.	6 hrs	₹ 10,000
NDS-PB-BC-02	Biomolecules Overview	Macromolecule chemistry.	6 hrs	₹ 10,000
NDS-PB-BC-03	Water, pH & Buffers	Biochemical-equilibrium basics.	6 hrs	₹ 10,000
NDS-PB-BC-04	Membrane Biochemistry	Membrane-structure chemistry.	6 hrs	₹ 10,000

Carbohydrate Metabolism

Glycolysis and glucose homeostasis

5
PROTOCOLS

CODE	PROTOCOL	DESCRIPTION	DURATION	FEE (INR)
NDS-PB-CH-01	Carbohydrate Chemistry	Sugar-structure biochemistry.	6 hrs	₹ 11,000
NDS-PB-CH-02	Glycolysis & TCA Cycle	Central-metabolism pathways.	8 hrs	₹ 14,500
NDS-PB-CH-03	Glycogen Metabolism	Storage-metabolism.	7 hrs	₹ 12,500
NDS-PB-CH-04	Gluconeogenesis & Regulation	Glucose-homeostasis.	7 hrs	₹ 12,500
NDS-PB-CH-05	Carbohydrate-Metabolism Disorders	Metabolic-disorder biochemistry.	6 hrs	₹ 11,000

Lipid Metabolism

Fatty-acid and cholesterol biochemistry

4
PROTOCOLS

CODE	PROTOCOL	DESCRIPTION	DURATION	FEE (INR)
NDS-PB-LP-01	Lipid Chemistry & Classification	Lipid-structure biochemistry.	6 hrs	₹ 11,000
NDS-PB-LP-02	Fatty-Acid Metabolism	Oxidation and synthesis.	8 hrs	₹ 14,500
NDS-PB-LP-03	Cholesterol & Lipoproteins	Lipid-transport biochemistry.	7 hrs	₹ 12,500
NDS-PB-LP-04	Ketone Bodies & Disorders	Lipid-disorder biochemistry.	6 hrs	₹ 11,000

Protein & Amino-Acid Metabolism

Nitrogen metabolism

4
PROTOCOLS

CODE	PROTOCOL	DESCRIPTION	DURATION	FEE (INR)
NDS-PB-PR-01	Amino-Acid Chemistry	Amino-acid biochemistry.	6 hrs	₹ 11,000
NDS-PB-PR-02	Protein Structure & Function	Protein-organisation biochemistry.	7 hrs	₹ 12,500
NDS-PB-PR-03	Amino-Acid Metabolism	Nitrogen-metabolism pathways.	8 hrs	₹ 14,500
NDS-PB-PR-04	Urea Cycle & Disorders	Nitrogen-disposal biochemistry.	6 hrs	₹ 11,000

Nucleic Acid & Molecular Biology

Gene structure and expression

4
PROTOCOLS

CODE	PROTOCOL	DESCRIPTION	DURATION	FEE (INR)
NDS-PB-NA-01	Nucleic-Acid Chemistry	DNA and RNA structure.	7 hrs	₹ 13,500
NDS-PB-NA-02	DNA Replication & Repair	Genetic-maintenance biochemistry.	8 hrs	₹ 15,000
NDS-PB-NA-03	Transcription & Translation	Gene-expression biochemistry.	8 hrs	₹ 15,000
NDS-PB-NA-04	Gene Regulation	Expression-control biochemistry.	7 hrs	₹ 13,500

Enzymes & Coenzymes

Catalysis and clinical enzymology

4
PROTOCOLS

CODE	PROTOCOL	DESCRIPTION	DURATION	FEE (INR)
NDS-PB-EZ-01	Enzyme Classification & Kinetics	Enzyme-function biochemistry.	7 hrs	₹ 12,000
NDS-PB-EZ-02	Enzyme Inhibition & Regulation	Catalytic-control biochemistry.	7 hrs	₹ 12,000
NDS-PB-EZ-03	Coenzymes & Cofactors	Cofactor biochemistry.	6 hrs	₹ 10,000
NDS-PB-EZ-04	Clinical Enzymology	Diagnostic-enzyme biochemistry.	6 hrs	₹ 10,000

Bioenergetics & Biological Oxidation

Energy metabolism

4
PROTOCOLS

CODE	PROTOCOL	DESCRIPTION	DURATION	FEE (INR)
NDS-PB-BE-01	Bioenergetics Principles	Energy-transfer biochemistry.	7 hrs	₹ 12,000
NDS-PB-BE-02	Electron-Transport Chain	Oxidative-phosphorylation.	8 hrs	₹ 13,500
NDS-PB-BE-03	ATP & High-Energy Compounds	Energy-currency biochemistry.	6 hrs	₹ 10,000
NDS-PB-BE-04	Biological Oxidation	Redox-biochemistry.	6 hrs	₹ 10,000

Vitamins & Minerals

Micronutrient biochemistry

4
PROTOCOLS

CODE	PROTOCOL	DESCRIPTION	DURATION	FEE (INR)
NDS-PB-VM-01	Fat-Soluble Vitamins	A, D, E and K biochemistry.	6 hrs	₹ 9,500
NDS-PB-VM-02	Water-Soluble Vitamins	B-complex and C biochemistry.	6 hrs	₹ 9,500
NDS-PB-VM-03	Minerals & Trace Elements	Mineral biochemistry.	6 hrs	₹ 9,500
NDS-PB-VM-04	Vitamin & Mineral Deficiencies	Deficiency biochemistry.	6 hrs	₹ 9,500

Hormone Biochemistry

Signalling and hormone action

4
PROTOCOLS

CODE	PROTOCOL	DESCRIPTION	DURATION	FEE (INR)
NDS-PB-HM-01	Hormone Chemistry & Action	Hormone-biochemistry fundamentals.	7 hrs	₹ 12,000
NDS-PB-HM-02	Signal Transduction	Receptor-signalling biochemistry.	7 hrs	₹ 12,000
NDS-PB-HM-03	Steroid & Peptide Hormones	Hormone-class biochemistry.	6 hrs	₹ 10,000
NDS-PB-HM-04	Endocrine Biochemistry Disorders	Hormonal-disorder biochemistry.	6 hrs	₹ 10,000

Integration of Metabolism

Metabolic coordination

4
PROTOCOLS

CODE	PROTOCOL	DESCRIPTION	DURATION	FEE (INR)
NDS-PB-IN-01	Integration of Metabolism	Pathway-coordination.	7 hrs	₹ 12,000
NDS-PB-IN-02	Fed & Fasting States	Metabolic-state biochemistry.	7 hrs	₹ 12,000
NDS-PB-IN-03	Tissue-Specific Metabolism	Organ-metabolism integration.	6 hrs	₹ 10,000
NDS-PB-IN-04	Inborn Errors of Metabolism	Metabolic-disorder overview.	6 hrs	₹ 10,000

Connective & Mineralised-Tissue Biochemistry

Matrix and hard-tissue chemistry

4
PROTOCOLS

CODE	PROTOCOL	DESCRIPTION	DURATION	FEE (INR)
NDS-PB-CT-01	Collagen & Elastin Biochemistry	Connective-tissue chemistry.	7 hrs	₹ 13,500
NDS-PB-CT-02	Proteoglycans & GAGs	Ground-substance biochemistry.	7 hrs	₹ 13,500
NDS-PB-CT-03	Mineralised-Tissue Biochemistry	Enamel, dentine and bone chemistry.	8 hrs	₹ 15,000
NDS-PB-CT-04	Connective-Tissue Disorders	Matrix-disorder biochemistry.	6 hrs	₹ 11,500

Saliva & Oral-Fluid Biochemistry

Salivary and caries chemistry

4
PROTOCOLS

CODE	PROTOCOL	DESCRIPTION	DURATION	FEE (INR)
NDS-PB-SA-01	Saliva Composition & Biochemistry	Salivary-fluid chemistry.	7 hrs	₹ 13,500
NDS-PB-SA-02	Saliva Function & Protection	Oral-protection biochemistry.	7 hrs	₹ 13,500
NDS-PB-SA-03	Plaque & Calculus Biochemistry	Deposit biochemistry.	7 hrs	₹ 13,500
NDS-PB-SA-04	Caries Biochemistry	Demineralisation chemistry.	6 hrs	₹ 11,500

Calcium, Phosphate & Bone Biochemistry

Mineral homeostasis

4
PROTOCOLS

CODE	PROTOCOL	DESCRIPTION	DURATION	FEE (INR)
NDS-PB-CB-01	Calcium & Phosphate Homeostasis	Mineral-regulation biochemistry.	7 hrs	₹ 13,500
NDS-PB-CB-02	Bone-Mineral Biochemistry	Mineralisation chemistry.	7 hrs	₹ 13,500
NDS-PB-CB-03	Hormonal Calcium Control	PTH, vitamin-D and calcitonin.	7 hrs	₹ 13,500
NDS-PB-CB-04	Mineralisation & Demineralisation	Tooth-mineral biochemistry.	6 hrs	₹ 11,500

Immunochemistry & Molecular Immunology

Immune biochemistry

4
PROTOCOLS

CODE	PROTOCOL	DESCRIPTION	DURATION	FEE (INR)
NDS-PB-IM-01	Immunoglobulin Biochemistry	Antibody-structure chemistry.	7 hrs	₹ 13,500
NDS-PB-IM-02	Complement & Inflammation	Immune-mediator biochemistry.	7 hrs	₹ 13,500
NDS-PB-IM-03	Molecular Immunology	Immune-mechanism biochemistry.	7 hrs	₹ 13,500
NDS-PB-IM-04	Oral Immunochemistry	Mucosal-immunity biochemistry.	6 hrs	₹ 11,500

Nutrition Biochemistry

Nutrient metabolism and assessment

4
PROTOCOLS

CODE	PROTOCOL	DESCRIPTION	DURATION	FEE (INR)
NDS-PB-NB-01	Nutrition Biochemistry	Nutrient-metabolism overview.	6 hrs	₹ 9,500
NDS-PB-NB-02	Energy & Macronutrient Balance	Caloric-balance biochemistry.	6 hrs	₹ 9,500
NDS-PB-NB-03	Diet & Oral-Health Biochemistry	Nutrition-disease links.	6 hrs	₹ 9,500
NDS-PB-NB-04	Nutritional Assessment Biochemistry	Status-marker biochemistry.	5 hrs	₹ 8,000

Clinical & Laboratory Biochemistry

Diagnostic biochemistry

4
PROTOCOLS

CODE	PROTOCOL	DESCRIPTION	DURATION	FEE (INR)
NDS-PB-LB-01	Clinical Biochemistry Tests	Diagnostic-test interpretation.	8 hrs	₹ 17,500
NDS-PB-LB-02	Liver & Renal Function Tests	Organ-function biochemistry.	7 hrs	₹ 15,500
NDS-PB-LB-03	Lipid & Glucose Profiles	Metabolic-panel interpretation.	7 hrs	₹ 15,500
NDS-PB-LB-04	Biochemical Laboratory Techniques	Assay-methodology.	7 hrs	₹ 15,500

Molecular Biology & Genomics

Molecular techniques and diagnostics

4
PROTOCOLS

CODE	PROTOCOL	DESCRIPTION	DURATION	FEE (INR)
NDS-PB-MO-01	Molecular Biology Techniques	PCR, blotting and sequencing.	8 hrs	₹ 22,500
NDS-PB-MO-02	Recombinant DNA Technology	Genetic-engineering basics.	8 hrs	₹ 22,500
NDS-PB-MO-03	Genomics & Proteomics	Omics-technology overview.	8 hrs	₹ 22,500
NDS-PB-MO-04	Molecular Diagnostics	Molecular-test biochemistry.	8 hrs	₹ 22,500

Omics, AI & Computational Physiology

Systems and precision biology

4
PROTOCOLS

CODE	PROTOCOL	DESCRIPTION	DURATION	FEE (INR)
NDS-PB-OM-01	Salivaomics & Biomarkers	Saliva-based molecular profiling.	9 hrs	₹ 29,000
NDS-PB-OM-02	Systems Biology & Metabolomics	Integrative-omics analysis.	9 hrs	₹ 29,000
NDS-PB-OM-03	AI in Physiology & Biochemistry	Computational-biology applications.	9 hrs	₹ 29,000
NDS-PB-OM-04	Precision & Predictive Biology	Personalised-biology frontier.	8 hrs	₹ 25,500

ENROL • MASTER • LEAD

Fellowship-Grade Physiology & Biochemistry Training

Every protocol in this catalogue is delivered as supervised hands-on training on working clinical and digital-laboratory equipment — spanning instrumentation, advanced technique, digital and robotic workflows, biomaterials and case documentation. Protocols combine into custom fellowship tracks tailored to individual specialists or institutional programmes.

- 33 specialist sub-streams
- 135 training protocols
- 892 total training hours
- ₹ 16,57,500 full-department value

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DENTAL SCIENCES • PHYSIOLOGY & BIOCHEMISTRY TRAINING CENTRE