Department of Clinical Laboratory Technology

Board of Studies Meeting

The minutes of the 22nd meeting of Board of Studies held on 26.10.2026 at 10.30 am in the Department of CLT (Room No 1414).

Members Present:

S.No.	Name	Category
1	Dr. S. Kokila Associate Professor & Head Department of Clinical Laboratory Technology Dr. N. G. P. Arts and Science College, Coimbatore	Chairman
2	Dr. T.M. Karthikeyan Professor, KMCH Institute of Health Sciences & Research, Coimbatore	Subject Expert
3	Dr. Meena Mariappan Quality Control Manager Bioline Laboratories Coimbatore.	Industry Expert
4	Ms. S. Shruthi Assistant Professor, SRM Institute of Science and Technology, Trichy	Alumni
5	Dr. M. Thiruselvi Professor Department of Clinical Laboratory Technology Dr. N. G. P. Arts and Science College, Coimbatore	Member
6	Dr. S. Sasikala Associate Professor Department of Clinical Laboratory Technology Dr. N. G. P. Arts and Science College, Coimbatore	Member

The HoD and Chairman of the department of Clinical Laboratory Technology welcomed and introduced all the members and requested them for their support and contribution for the development of academic standard and enrichment of the syllabus.

Further, Chairman informed the inability of the following members to attend the meeting and requested to grant leave of absence. Dr. S. Selvakumar, Assistant Professor,

Bharathiar University - VC Nominee and Dr. Aruna, Professor, Department of Community Medicine, PSGIMSR - Subject Expert.

After brief discussion, the items of the agenda were taken one by one for discussion and the following resolutions were passed.

Item 22.1: *To review and approve the minutes of the previous meeting held on* 02.04.2026.

The Chairman of the Board presented the minutes of the previous meeting held on 02.04.2026 and requested the members to approve. After brief discussion the following resolution was passed.

Resolution:

Resolved to approve the minutes of the previous meeting held on 02.04.2026.

Item 22.2: *To consider and approve the scheme and syllabi for VI semester for the students admitted during the academic year* 2024-25.

The chairman presented the syllabi for semester VI for the students admitted during the academic year 2024-25.

Course Code	Course	Changes and Reason
24CLU6CA	Core: Cytology	Subject expert recommended to include: Body-fluid preparation, cytospin and cell-block techniques in Unit I to enhance theoretical knowledge in diagnosis of cytopathology. Artificial Intelligence based Immunocytochemistry for diagnosis – PRISMA DTA in Unit II to emphasize its role in systematic reviews of diagnostic test and accuracy.
24CLU6CB	Core: Diagnostic Molecular Techniques	Internal member suggested to incorporate Applications of Artificial Intelligence in Molecular Diagnostics in Unit IV to familiarize students with the applications of AI for accuracy and interpretation of molecular tests. New Generation Sequencing is changed to Next generation sequencing in Unit V
24CLU6DA	DSE-II: Good Clinical Laboratory Practices and Professional Ethics	Internal member recommended to include Integration of Artificial Intelligence in Good Clinical Laboratory Practices in Unit III to understand the role of AI in quality control, error detection and laboratory data management under GCLP. Industry expert suggested to include Levey Jennings charts, Westgard multi rules in Unit V so as to apply for monitoring analytical performance and detecting errors

24CLU6DD	DSE III: Bio-safety and Biowaste Management	Internal member suggested to include Role of IKS in Biosafety and Biowaste Management – Swachhata, Prakriti Conservation in Unit IV to implement the SDG goals

After discussion the following resolution was passed.

Resolution:

Resolved to approve the above modifications and adopt the revised syllabi for the students admitted during the academic year 2024-25.

Item 22.3: *To approve the panel of examiners for question paper setting and evaluation of answer scripts for even semester during the academic year 2026-2027.*

The chairman presented the panel of examiners for question paper setting, question paper scrutiny and conduct of practical and theory examinations for even semester during the academic year 2026-2027.

Resolution:

Resolved to approve the panel of examiners for question paper setting and evaluation of answer scripts for the even semester during the academic year 2026-2027.

Finally, the chairman thanked all the members for their co-operation and contribution in enriching the syllabus with active participation in the meeting and sought the same spirit in the future also. The meeting was closed with formal vote of thanks proposed by Dr. S. Kokila, Chairman - Clinical Laboratory Technology.

26/10/26

Date: 26.10.2026

(Dr. S. Kokila)

BoS Chairman/HoD
Department of Clinical Laboratory Technology
Dr N. G. P. Arts and Science College
Coimbatore – 641 048

Syllabus Revision

Faculty: Bio Sciences **Board : Clinical Laboratory Technology**

Semester: VI

Course Code/ Name: 24CLU6CA Core: Cytology

Unit	Existing	Changes
I	**Cell structure and Staining** Normal cell structure and function, Normal Histology and cytology of epithelial and connective tissue, Role of consent in Sample collection: Collection and preparation of samples, Fixation, fixatives, Storage and Transportation of samples, Staining - Principles, Preparations of reagents, techniques: a. Papanicolaou's stain, b. May – Grunwald Giemsa stain	Body-fluid preparation, cytospin and cell-block techniques.
II	**FNAC and non-gynae cytology** Normal and malignant cytology in the Gastrointestinal tract, Respiratory tract, Effusions, CSF, and Urinary tract. FNAC of Breast, Lymph node, Thyroid and Salivary glands, liver, pancreas, and biliary system	
III	**Gynae cytology** Normal cervix, cervical neoplasia, Pathogenesis of cervical cancer, cervical screening, cervical cytopathology. Collecting cellular samples from the cervix: Conventional Pap smear, Types of Liquid-based cytology.	
IV	**Flow cytometry** Flow cytometry -Principles, General components of a flow Cytometer: (a) Fluidics (b) Optics: Laser (argon), Dichroic Filters and Mirrors, Photodiode, PMT (photomultiplier tubes) (c) Detectors (d) Electronics. Fluorochromes, Fluorochrome conjugated Antibodies, Benchtop Flow Cytometers, Immunophenotyping, Data analysis and gating, procedure and evaluation. Image analysis Clinical applications and Research applications.	
V	**Immuno-cytochemistry** Introduction, Basic concepts of immunocytochemistry - Antigen, Antibody, Antigen Retrieval, Antigen-Antibody interaction, HLA B27, CD4, CD8, Monoclonal antibodies preparations and their dilution, Polyclonal antibodies, Basic principles in fluorescence reactions.	Artificial Intelligence based Immunocytochemistry for diagnosis – PRISMA DTA

PERCENTAGE OF SYLLABUS REVISED: 8 %

COURSE FOCUS ON:

✓	Skill Development	✓	Entrepreneurial Development
✓	Employability	✓	Innovations
	Intellectual Property Rights		Gender Sensitization
	Social Awareness/ Environment		Constitutional Rights/ Human Values/ Ethics

Syllabus Revision

Faculty: Bio Sciences
Semester: VI
Board: Clinical Laboratory Technology
Course Code/ Name: 24CLU6CB **Core:** Diagnostic Molecular Techniques

Unit	Existing	Changes
I	**Diseases and sample preparation** Introduction: Diseases- infectious diseases, physiological and metabolic errors, genetic basis and inherited diseases. General approach to clinical specimens - Sample collection, transport, Storage, Discarding and processing of samples for diagnosis	
II	**Infectious disease diagnosis** Infectious disease of bacteria, viruses and fungal and its diagnosis: Diagnosis of infection caused by Streptococcus, Salmonella, Vibrio and Mycobacterium sp., Diagnosis of fungal diseases: Candidiasis and Dermatophytosis. Diagnosis of RNA and DNA viruses - Pox viruses, Adenoviruses, Hepatitis Viruses and Retroviruses, Corona virus. Diagnosis of Protozoan diseases and helminthic disease: Amoebiasis, Malaria and Filariasis.	
III	**Inherited diseases and Diagnosis** Genetic disorders and sex-linked disorders –Hemophilia, Sickle cell anemia, Retinoblastoma, Cystic Fibrosis, Duchenne muscular Dystrophy, Identification of inherited disorders, Cancer genetics - Dominant and recessive allele, oncogenes and tumor suppressor genes	
IV	**Molecular Diagnostic Tools** Nucleic acid amplification methods - PCR and its types- Reverse Transcription PCR (RT-PCR), Real time PCR, Inverse PCR. Proteins and Amino acids - Qualitative and quantitative techniques: Amino acid sequence analysis.	Applications of Artificial Intelligence in molecular diagnostics
V	**Hybridization techniques and DNA sequencing methods** Blotting Techniques- Southern, Northern, and Western blotting, In-situ hybridization - FISH, DNA microarrays – types and applications, Automated DNA sequencing - Sanger's sequencing methods and its principle and application, Advances in DNA sequencing- Next Generation sequencing Methods and Pyrosequencing	

PERCENTAGE OF SYLLABUS REVISED: 4 %

COURSE FOCUS ON:

✓	Skill Development	✓	Entrepreneurial Development
✓	Employability	✓	Innovations
	Intellectual Property Rights		Gender Sensitization
	Social Awareness/ Environment		Constitutional Rights/ Human Values/ Ethics

Syllabus Revision

Faculty: Bio Sciences **Board: Clinical Laboratory Technology**
Semester: VI
Course Code/ Name: 24CLU6DA **DSE-II: Good Clinical Laboratory Practices and Professional Ethics**

	Existing	Changes
I	**Scope and Levels of Laboratory** Scope, Levels of laboratories, Infrastructure, Personnel, Training & Development, Equipment, Reagents, and materials. Storage of reagents, materials, and methods of disposal. Standard operating procedure, Safety in laboratories, and Ethical considerations.	–
II	**Laboratory Facilities** Laboratory facilities- design and physical aspects of design. Laboratory equipment management-Instrument selection, budgeting, installation, training, and maintenance.	–
III	**Record and data management** Requisition form, Accession list, specimen collection, transport, turnaround time, and Critical value worksheet. Reporting test results, specimen rejection records, and data management.	Integration of Artificial Intelligence in good clinical laboratory practices.
IV	**Documentation practices** Good documentation practices, the purpose of laboratory documentation, types of documentation and records, documentation process and errors, principles of good documentation practices and benefits.	–
V	**Quality assurance** Quality assurance, quality assurance program, internal quality control – External quality assessment, Validation and Verification. Internal audit and summary of QAP activities.	Levey Jennings charts, Westgard multi rules

PERCENTAGE OF SYLLABUS REVISED: 6%

COURSE FOCUS ON:

✓	Skill Development	✓	Entrepreneurial Development
✓	Employability		Innovations
	Intellectual Property Rights		Gender Sensitization
	Social Awareness/ Environment	✓	Constitutional Rights/ Human Values/ Ethics

Syllabus Revision

Faculty: Bio Sciences
Semester: VI
Course Code/ Name: 24CLU6DD

Board: Clinical Laboratory Technology

Core: Bio-Safety and Biowaste Management

Unit	Existing	Changes
I	**Biosafety** Biosafety in laboratory, Laboratory associated infections and other hazards. Standard precautions, Hazard identification and risk analysis. Code of good and safe laboratory practice for support staff and responsibilities of the workers regarding biosafety. Personal safety measures- Use of glove, mask and personal grooming. Set up of a laboratory on the basis of safety priority and Laboratory Biosafety Guidelines. Laboratory Biosafety Level Criteria (BSL-1- 4). Chemical, electrical, fire and radiation safety. General Safety checklist, Hazardous properties of instruments and Laboratory chemicals.	
II	**Bioethics** Co-operation and working relationship with other health professionals, Confidentiality of patient information and test result-dignity and privacy of patient, Responsibility from acquisition of the specimen to the production of data, Accountability for quality and integrity of clinical laboratory services. Institutional ethical committee and its role, Health & Medical surveillance. Segregation of biowastes, Concern to air and water, biomedical authorization and environmental clearance.	
III	**Biowaste regulations** Categories of Biowaste, Regulatory Requirements - State and Central regulation regarding biomedical waste disposal and management.	Role of IKS in Biosafety and Biowaste management- Swachhata, Prakriti conservation.
IV	**Types of biowaste and segregation** Sources of biomedical waste; Types and color coding for different biomedical wastes, Importance of segregate at source, Types of health care waste: Infectious and non infectious waste, hazardous waste, solid and liquid waste, biodegradable and non biodegradable waste.	
V	**Biowaste management** Wastes management- life cycle of bio-medical wastes. Decontamination and disposal: Disinfection methods – Sterilization - steam sterilizing (Auto cleaving) - non-burn treatment technology, Microwave, wet thermal treatment, dry thermal treatment, chemical-based technologies. Disposal of hazardous wastes and radioactive wastes. Generation of Biogas from food wastes, Hazardous gases and its safe disposal.	

PERCENTAGE OF SYLLABUS REVISED: 3 %

COURSE FOCUS ON:

✓	Skill Development	✓	Entrepreneurial Development
✓	Employability	✓	Innovations
	Intellectual Property Rights		Gender Sensitization
✓	Social Awareness/ Environment	✓	Constitutional Rights/ Human Values/ Ethics

Department of Clinical Laboratory Technology

ATTENDANCE OF THE TWENTY SECOND BOARD OF STUDIES MEETING

Faculty: Biosciences **Board: Clinical Laboratory Technology**

S. No.	Name	Position	Signature
1	Dr.S.Kokila Associate Professor & Head Department of Clinical Lab Technology Dr. N. G. P. Arts and Science College, Coimbatore	Chairman	Present
2	Dr. S.Selvakumar Assistant Professor Department of Biochemistry Bharathiar University, Coimbatore.	Member (Subject Expert) VC Nominee	Absent
3	Dr. T.M. Karthikeyan Professor, Department of Pathology KMCH Institute of Health Sciences & Research, Coimbatore	Member (Subject Expert)	Present
4	Dr. Aruna Associate Professor Department of Community Medicine PSGIMSR, Coimbatore	Member (Subject Expert)	Absent
5	Dr. Meena Mariappan Quality Control Manager Bioline Laboratories, Coimbatore.	Member (Industry Expert)	Present
6	Ms. S. Shruthi Assistant Professor Abiramai Hospital College of Allied Health Sciences, Coimbatore	Alumni	Present
7	Dr.M.Thiruselvi Professor, Dept. of CLT Dr.N.G.P.Arts and Science College Coimbatore	Member	Present
8	Dr.S.Sasikala Associate Professor, Dept. of CLT Dr.N.G.P.Arts and Science College Coimbatore	Member	Present

Date: 26.10.2026

26/10/26

Board Chairman
(Dr.S.Kokila)

BoS Chairman/HoD
Department of Clinical Laboratory Technology
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