Department of Biotechnology
Board of Studies Meeting
Academic Year: 2026-27 (Even Semester)

The minutes of the 22nd meeting of Board of Studies held on 28.10.2026 at 10.00 am at the B1 Block- Room No. 1213. (Department of Biotechnology - Instrumentation Room)

Members Present:

S. No.	Name	Category
1	Dr. P. Chidambara Rajan	Chairman
2	Dr. Senthil Kumar, Associate Professor, Department of Biotechnology, Hindusthan College of Arts and Science, Coimbatore	VC Nominee
3	Dr. D. Natarajan, Professor, Department of Biotechnology, Periyar University, Salem	Subject Expert
4	Dr. Ranjith Kumar Rajamani,Chief Scientific Officer,Fire Ants Innov Tekhouse, Thudiyalur, Coimbatore	Industrial Expert
5	Prof. Mrs. K. Ramya, Assistant Professor, Department of Biotechnology, CMS College of Science and Commerce, Coimbatore	Alumni Member
6	Dr. R. Suganthi	Member
7	Dr. K. Arungandhi	Member
8	Dr. Arun P	Member
9	Dr. M.N. Kathiravan	Member
10	Dr. M. Shanmugavadivu	Member
11	Dr. M. Poongothai	Member
12	Dr. S. Saranya	Member
13	Mrs. C.R. Aarthi	Member
14	Ms. T.C. Udayasankari	Member
15	Dr. N. Kuppuchami	Co-opted Member
16	Dr. A. Hazel Verbina	Co-opted Member
17	Dr. K.Girija	Co-opted Member
18	Dr. S.Uma	Co-opted Member
19	Ms. T.K. Dharshini	Student Representative- PG

The HoD and Chairman of the Department of Biotechnology welcomed and introduced all the members and appreciated them for their continuous support and contribution for the development of academic standard and enrichment of the syllabus.

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 syllabi for II semester for UG and PG students admitted during the academic year 2026-2027.*

The chairman presented the detailed scheme and Syllabi for the students admitted from the academic year 2026-27 for the II semester. The members deliberated in detail about the modification required.

I M.Sc.:

Course Code	Course	Reason
26BTP2CQ	**Core Practical: Genetic Engineering and Environmental Biotechnology**	Dr.P. Senthil Kumar Sugesseted to incude **Restriction Fragment Length Polymorphism** and Remove **Metal analysis from environment samples by flame photometry** to enrich Genetic Engineering Practical.

After discussion it is unanimously decided to adopt the above changes.

Resolution:

Resolved to approve the above modification and adopt the revised syllabus for students admitted for the academic year 2026-27.

Item 22.3: *To consider and approve the syllabi for IV semester for the students admitted in UG and PG during the academic year 2025-2026.*

The chairman presented the detailed scheme for the students admitted in UG and PG from the academic year 2025-2026 and syllabi for the IV semester. The members deliberated in detail about the modification required.

After brief discussion the following resolution was passed.

Resolution:

Resolved to adopt and to retain the existing syllabus for the courses for UG and PG students admitted during the academic year 2025-26.

Item 22.4: *To consider and approve the syllabi for VI semester for the students admitted in UG during the academic year 2024-2025.*

The chairman presented the detailed scheme for the students admitted in UG from the academic year 2024-2025 and syllabus for the VI semester. The members deliberated in detail about the modification required.

III B.Sc:

Course Code	Course	Reason
24BTU6CB	**Bionanotechnology**	Dr.R. Ranjith Kumar sugesseted to incude **Toxicology studies** in **Unit IV.**
24BTU6DE	**Molecular Diagnostics**	Dr. P. Senthil Kumar suggested **to include the Primer designing for disease diagnostics** in **Unit - III.** Dr. K. Ramya suggested **to change the topic as Identification, analysis and interpretation of proteins by mass spectrometry and MALDI - TOF in disease prediction** in **Unit IV**

After brief discussion the following resolution was passed.

Resolution: Resolved to approve the above modification and adopt the revised syllabus for students admitted for the academic year 2024-25.

Item 22.5: *To consider and approve the syllabi for PG Diploma to be offered during the academic year 2026-27.*

The chairman presented the detailed scheme for PG Diploma courses to be offered to the students admitted from the academic year 2026-27 onwards. The members deliberated in detail about the modification required. After discussion it is unanimously decided to adopt the following changes.

Resolution:

Resolved to adopt and resolved to retain the existing syllabus for the students admitted during the academic year 2026-27 onwards.

Item 22.6: *To consider and approve the panel of examiners for conducting of End Semester Practical's examination, Central Valuation and Question Paper Setting.*

The chairman presented the detailed the panel of examiners for conducting of End Semester Practical's examination, Central Valuation and Question Paper Setting. The

members deliberated in detail about the modification required. After discussion it is unanimously decided to adopt the following changes.

Resolution:

Resolved to retain the existing panel without any modification for the students admitted from the academic year 2026-27.

Item 22.7: *To consider and approve the syllabi of Self - study paper offered in III semester for the students admitted during 2026-27.*

The chairman presented the detailed Self - study syllabi for the students admitted in UG and PG from the academic year 2026-2027. The members deliberated in detail about the modification required.

After discussion the following resolution was passed.

Resolution:

Resolved to adopt the existing syllabi of Food Technology for PG students and Biofertilizer Technology for UG students, and to approve the newly framed syllabi of Herbal Technology for PG students and Mushroom Farming for UG students for the students admitted from the academic year 2026-27.

Item 22.8: *To consider and approve the syllabi of IDC - Bioinformatics (25BTU4IC) offered to Microbiology students admitted during2025-26.*

The chairman presented the detailed syllabus of Bioinformatics for IV semester of UG Microbiology students admitted during 2025-26. The members deliberated in detail about the modification required.

After discussion the following resolution was passed.

Resolution:

Resolved to adopt and to retain the existing syllabus for the UG Microbiology students admitted during the academic year 2025-26.

Finally, the Chairman thanked all the members for their cooperation 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. M. Poongothai, Professor, Department of Biotechnology.

Date:28.10.2026

28.10.26

(Dr. P. Chidambara Rajan)

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

ATTENDANCE OF THE TWENTY SECOND BOARD OF STUDIES MEETING

Faculty: Biosciences **Board: Biotechnology**

Date : 28/10/2026
Time : 10.00 a.m.
Venue : Department of Biotechnology (Room. No: 1213)

The following members were present for the Board of Studies meeting

S. No	Name	Designation	Signature
1.	Dr. P. Chidambara Rajan Professor and Head	Chairman	PRESENT
2.	Dr. P. Senthil Kumar, Associate Professor, Department of Biotechnology, Hindusthan College of Arts and Science, Coimbatore	University Nominee	PRESENT
3.	Dr. D. Natarajan, Associate Professor, Department of Biotechnology, Periyar University, Salem.	Subject Expert	PRESENT
4.	Dr. Ranjith Kumar Rajamani, Chief Scientific Officer, Fine Ants Innov Tekhouse, Thudiyalur, Coimbatore	Industrial expert	PRESENT
5.	Prof. Mrs. K. Ramya, Assistant Professor, Department of Biotechnology, CMS College of Science and Commerce, Coimbatore	Alumni	PRESENT
6.	Ms. T.K. Dharshini II M.Sc. Biotechnology	Student Representative	PRESENT
7.	Part I (Language I) Dr. N. Kuppuchamy Associate Professor and Head Department of Tamil	Co-opted member	PRESENT
8.	Part II (Language II) Dr. A. Hazel Verbina Professor and Head Department of English	Co-opted member	PRESENT
9.	Allied - IDC- Biophysics Dr.K.Girija Associate Professor and Head Department of Physics	Co-opted member	PRESENT
10.	Allied -IDC- Python for Biologists Dr. S.Uma Assistant Professor and Head Department of Computer Science	Co-opted member	PRESENT
11.	Dr. R. Suganthi Professor	Internal Member	PRESENT

12.	Dr. K. Arungandhi Professor	Internal Member	PRESENT
13.	Dr. Arun. P Professor	Internal Member	PRESENT
14.	Dr. M.N. Kathiravan Professor	Internal Member	PRESENT
15.	Dr. M. Shanmugavadivu Associate Professor	Internal Member	PRESENT
16.	Dr. M. Poongothai Associate Professor	Internal Member	PRESENT
17.	Dr. S. Saranya Assistant Professor	Internal Member	PRESENT
18.	Mrs. C.R. Aarthi Assistant Professor	Internal Member	PRESENT
19.	Ms.T.C.Udayasankari Assistant Professor	Internal Member	PRESENT

28.10.26

Date: 28.10.2026

(Dr. P. Chidambara Rajan)

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

Department of Biotechnology
M.Sc. Biotechnology
Syllabus Revision

Faculty: Biosciences **Board: Biotechnology**
Semester: II
Course Code/Name: 26BTP2CQ

Core: CORE PRACTICAL: GENETIC ENGINEERING AND ENVIRONMENTAL BIOTECHNOLOGY

Existing	Revised
1. Extraction of genomic DNA from bacteria 2. Extraction of DNA from Fungi 3. Extraction of DNA from goat liver 4. Extraction of DNA from Plant sample 5. Isolation of plasmid DNA from bacteria 6. Agarose gel electrophoresis & Estimation of DNA purity and Quantification 7. Restriction digestion and ligation of Lambda phage DNA 8. Isolation of RNA and separation in denaturing gel 9. Water quality Analysis–color, pH, MPN and acidity 10. Total Hardness by EDTA titrimetric method and chloride estimation 11. Estimation of total alkalinity, carbonate and bicarbonate 12. Determination of Chemical Oxygen Demand (COD) ~~13. Metal analysis from environment samples by flame photometry~~ 14. Isolation and screening of dye degrading bacteria from industrial waste water	Restriction Fragment Length Polymorphism

PERCENTAGE OF SYLLABUS REVISION: 3.8%
COURSE FOCUS ON:

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

Department of Biotechnology
B.Sc. Biotechnology
Syllabus Revision

Faculty: Biosciences **Board: Biotechnology**

Semester: VI

Course Code/Name: 24BTU6CB **Core: Bionanotechnology**

Unit	Existing	Revised
I	Key features of Nano-size, size determination – XRD and Particle size analyzer. Comparison of particle behavior at nanosize to macrosize. Strategies for Nanoarchitecture (top down & bottom up approaches). Nanobiotechnology – Biogenic nanoparticle synthesis from plants, bacteria and yeast. Biomolecular design.	--
II	Structural principles of Bionanotechnology: Natural Bionanomachinery – (Eg: Lotus leaf effect, Gecko lizard, fish hair structures, butterfly wings). Overview of Nanodevices - Strategies for construction of Nanodevices using Carbon as a raw material. Protein folding Aspects: Stable structure, Globular proteins, Role of chaperones in folding, lipid bilayer, DNA based nanostructures.	--
III	Principles of Functional Bionanotechnology. Information-driven nanoassembly: Energetics; Biomaterials- Filaments and fibrils, Minerals combined with biomaterials for specific applications. IKS-Based Biomaterials for Tissue Engineering. Biomolecular sensing taste and light sensors. Machine phase Bionanotechnology- Muscle sarcomeres and nerves).	--
IV	Differentiation of Nanoparticles and Nanosystems. Conventional drug delivery & targeted drug delivery – its role and advantages; Clinical Trials involved in Bionanotechnology.	Toxicological studies of nanoparicles
V	Principles, types and applications of Bionano-imaging, Magnetic nano-particles, nano-biosensors, biochips, biorobotics, nanopore technology and nanoarrays in medicine, agriculture, food and environmental science. Role of AI in Bionanotechnology. Opportunities and challenges of Nanotechnology.	--

PERCENTAGE OF SYLLABUS REVISION: 2.2%

COURSE FOCUS ON:

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

Department of Biotechnology
B.Sc. Biotechnology
Syllabus Revision

Faculty: Biosciences **Board: Biotechnology**
Semester: VI
Course Code/Name: 24BTU6DE **DSE: Molecular Dianostics**

Unit	Existing	Revised
I	Introduction to Disease - Types -Characteristics - Classification of Diseases - Epidemiological aspects of diseases of national importance - Epidemiological aspects of Non - Communicable Diseases - Emerging and Re - Emerging Diseases.	
II	History of diagnostics - Age of molecular diagnostics: Significances, Scope - Rise of Diagnostic industry in Indian and global scenario - Molecular Techniques in diagnosis of diseases - Biomarkers in disease diagnostics - Different terminology used in clinical laboratories.	
III	Agarose gel electrophoresis, PCR, qPCR, Multiplex-PCR, RFLP, DNA fingerprinting, Southern Blotting, Electrophoresis techniques, DNA Sequencing. ~~Introduction to primer designing~~.	Primer designing for molecualr disease diagnostics
IV	SDS-PAGE electrophoresis, 2D gel electrophoresis, western blotting and ELISA. Chromatography method of separation and detection: high performance liquid chromatography. Identification of a molecule by mass spectrometry: ~~introduction to the technique, its applications in diagnostics and basic interpretation of the mass spectrometer graphs. MALDI- TOF and data interpretations.~~	Identification, analysis and interpretation of proteins by mass spectrometry and MALDI- TOF in disease prediction
V	Traditional disease diagnosis methods and tools – infection caused by Salmonella and Mycobacterium. Diagnosis of Candidiasis. Diagnosis of Pox and Hepatitis viruses. Diagnosis of Protozoan disease (Amoebiasis and Leishmanisasis). Cancer- different types of cancers, genetics of cancer-oncogenes, tumour suppressor genes. Methods available for the diagnosis of genetic diseases and metabolic disorders. Synthetic Data Generation for Rare Molecular Diseases.	

PERCENTAGE OF SYLLABUS REVISION: 10.6%
COURSE FOCUS ON :

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