



Dr. N.G.P. ARTS AND SCIENCE COLLEGE

(An Autonomous Institution, Affiliated to Bharathiar University, Coimbatore)
Approved by Government of Tamil Nadu and Accredited by NAAC A++ Grade (3rd Cycle- 3.64 CGPA)
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BoS

18th

Department of Biochemistry

Board of Studies Meeting

The minutes of the 18th meeting of Board of Studies held on 07.11.2024 at 10.00 am at the Innovation Centre.

Members Present:

S.No.	Name	Category
1	Dr. Gowri. S	Chairman
2	Dr. A. Vijaya Anand Professor, Dept. of Human Genetics and Molecular Biology Bharathiar University, Coimbatore- 641046	VC Nominee
3	Dr. Kalaiselvi Senthil, Professor, Department of Biochemistry, Biotechnology and Bioinformatics, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore	Subject Expert
4	Dr. S. Vadivel HOD of Clinical Biochemistry and Quality Control System, K.G. Hospital, Coimbatore- 641018	Alumni member
5	Dr. N. Kannikaparameswari, Professor in Biochemistry	Member
6	Dr. T. Indhumathi, Professor in Biochemistry	Member
7	Dr. K. Rajathi, Professor in Biochemistry	Member
8	Dr. D. Pradeepa, Assistant Professor in Biochemistry	Member
9	Mrs. S. Divya Priya, Assistant Professor in Biochemistry	Member
10	Mrs. G. Lalitha, Assistant Professor in Biochemistry	Member
11	Dr. K. Swathi, Assistant Professor in Biochemistry	Member
12	Dr. M. Kaviya, Assistant Professor in Biochemistry	Member
13	Dr. N. Kuppuchamy, Head, Dept of Tamil	Co-opted member
14	Dr. A. Hazel Verbina, Head, Dept of English	Co-opted member
15	Dr. K. Girija, Head, Dept of Physics	Co-opted member
16	Dr. Uma.S Head, Dept of Computer science	Co-opted member
17	Ms. Vidhya Shree PG - Biochemistry	Student Representative- PG
18	Ms. Yashmitha. R UG - Biochemistry	Student Representative- UG

The HoD and Chairman of the Department of Biochemistry 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.

Further, Chairman informed the inability of the following members to attend the meeting and requested to grant leave of absence.

1. Dr.D.Amirtham - Subject Expert
2. Dr. E. Santhini – Industrial Expert

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

Item 18.1: *To review and approve the minutes of the previous meeting held on 04-04-2024.*

The chairman of the Board presented the minutes of the previous meeting held on 04-04-2024 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 04-04-2024.

The items of the agenda were taken one by one for discussion and the following resolutions were passed.

Item 18.2: *To consider and approve the syllabi for II semester for the students admitted in UG and PG during the academic year 2024-2025.*

The chairman presented the detailed scheme and Regulation for the students admitted for the academic year 2024-25 and syllabus for the II semester. The members deliberated in detail about the modification required. After discussion it is unanimously decided to adopt the following changes.

Changes Made:

UG Biochemistry

Course Code	Course	Reason
24BCU2CP	Enzymes and Microbiology	Dr.Vadivel suggested to include Analysis of enzyme kinetics using ENZO software. DBT Star Status recommended practical on Enzyme Inhibition kinetics studies was included

PG Biochemistry

Course Code	Course	Reason
24BCP2CP	Immunology and Molecular Biology	Dr. Kalaiselvi Senthil suggested to include techniques on <ul style="list-style-type: none"> • Isolation of Immunoglobulin Y (IgY) from chicken eggs • Isolation of lymphocytes from blood, • Isolation of chromosomal DNA from

		blood to enables the students to learn cutting-edge research techniques in the fields of Immunology and Molecular Biology
24BCP2CQ	Microbial Biochemistry and Metabolism	Dr.Vijaya Anand suggested to include <ul style="list-style-type: none"> • Production of extracellular metabolites-melanin from actinomycetes, • Screening of Antibiotic producing microorganisms by crowded plate technique as these are crucial methods in bioprocess technology, opens up various career opportunities in industries such as Biotechnology, Pharmaceuticals, Food and beverages.

After 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 18.3: *To consider and approve the syllabi for IV semester for the students admitted in UG and PG during the academic year 2023-2024.*

The chairman presented the detailed scheme and Regulation for the students admitted for the academic year 2023-24 and syllabus for the IV semester. The members deliberated in detail about the modification required. After discussion it is unanimously decided to adopt the following changes.

Changes Made:

Course Code	Course	Reason
233BC1A4EP	Bioinformatics	Dr.Kalaiselvi Senthil suggested to include advanced topics in Bioinformatics <ul style="list-style-type: none"> • Search tool for the retrieval of interacting Genes/Proteins – STRING, • Lead identification and optimization, • Swiss ADME, • Molecular Docking - Swiss Dock which are crucial in today's scientific research and development, especially in the fields of Pharmaceuticals, Biotechnology and Medicine.

After 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 2023-24.

Item 18.4: To consider and approve the changes in the syllabi for VI semester for the students admitted during the academic year 2022-23.

The Chairman presented the detailed syllabus for the VI semester for the students admitted for the academic year 2022-23. The details of changes made also presented as follows:

Changes Made:

B.Sc. Biochemistry		
Course code	course	Reason
223BC1A6CA	Clinical Biochemistry	Dr.Kalai selvi Senthil and Dr.Vadivel suggested to include Diagnosis of clinical disorders in the all the units to equips the students with the knowledge and skills in medical diagnosis, research, and healthcare.
223BC1A6CB	Hormonal Biochemistry	Dr.Vijayaanand suggested to include classification of hormones based on Mechanism of action in Unit I to enhance understanding of hormone mechanisms
223BC1A6SA	Molecular Diagnostics	Dr.Vijayaanand and Dr.Kalaiselvi Suggested to include <ul style="list-style-type: none"> • case studies on Karyotyping, • Chromosome banding pattern analysis, • Pedigree Analysis • Demonstrations on RT PCR to relate the significance and applications of Molecular Diagnostics techniques in disease diagnosis, treatment, and research.
223BC1A6DD	Pharmaceutical Biochemistry	Dr.Vijayaanad Suggested to include examples of cytotoxic drugs to grasp the comprehensive mechanism of cytotoxic drugs in Unit IV

New Courses Introduced:

Course code	Course	Reason
223BC1A6CP	Clinical and Hormonal Biochemistry	The course will integrate the theoretical knowledge of Clinical and Hormonal Biochemistry with practical applications
223BC1A6DA	Neurobiochemistry	The course will provide the students with a solid foundation for learning brain function, neurological disorders, and therapeutic interventions
223BC1A6DB	Marine Biochemistry	The course will provide a comprehensive understanding of oceanic processes and prepare students for careers in research, conservation, and management
223BC1A6DC	Sports Biochemistry	The course provides a comprehensive knowledge on exercise-induced physiological changes, optimizing athletic

		performance, and enhancing physical health and the students will find rewarding career in health, fitness, and sports.
223BC1A6DE	Bioprocess Technology	The course updates the students with fundamentals of fermentation processes and applications and equip the students to find job in the field of Food and Beverage, Pharmaceuticals, Biotechnology industries.
223BC1A6DF	Bioprospecting and Bioresources	The course updates the students with concepts in discovery of novel biomolecules and bioactive compounds and will provide the students with career opportunities in research, industry, conservation, and policy, driving innovation and sustainability.

Courses Removed:

Course code	Course	Reason
193BC1A6DA	Concepts in clinical Trails	The course is replaced by Marine Biochemistry which offers job opportunities in marine Research
193BC1A6DD	Bioentrepreneurship	The course is replica of Innovation, IPR and Entrepreneurship which is offered in the same semester as AECC course.
193BC1A6DE	Environmental Biochemistry	The course is offered already offered in fifth Semester

After discussion the following resolution was passed with the above changes and modifications.

Resolution:

Resolved to approve the syllabus for the VI semester for the students admitted for the academic year 2022-23.

Item 18.5: To consider and approve the changes in the syllabus - 223BC1A6AA: Innovation, IPR and entrepreneurship for VI semester for the students admitted during the academic year 2022-23.

The Chairman presented the detailed syllabus of 223BC1A6AA: Innovation, IPR and entrepreneurship for the VI semester for the students admitted for the academic year 2022-23. The details of changes made also presented as follows:

Changes Made:

B.Sc. Biochemistry		
Course code	course	Reason
223BC1A6AA	Innovation, IPR and entrepreneurship	Dr.Kalaiselvi Senthil suggested to include International IPR policy and Infringement Case studies in all the units to understand the IPR concepts with real time examples.

After discussion the following resolution was passed with the above changes and modifications.

Resolution:

Resolved to approve the syllabus of 223BC1A6AA: Innovation, IPR and entrepreneurship for the VI semester for the students admitted for the academic year 2022-23.

Item 18.6: *To consider and approve the changes in the syllabus - 223BC1A4IA: IDC Biochemistry II and - 223BC1A4IP: IDC Biochemistry practical for IV semester for the B.Sc. Food Science and Nutrition students admitted during the academic year 2023-24.*

The Chairman presented the detailed syllabus of - 223BC1A4IA: IDC Biochemistry II and - 223BC1A4IP: IDC Biochemistry practical for semester-IV for the B.Sc. Food Science and Nutrition students admitted during the academic year 2023-24.

Resolution:

Resolved to retain the existing syllabus of 2022-23 batch without any modification for the students admitted from the academic year 2023-24.

Item 18.7: *To consider and approve NPTEL equivalent courses for credit transfer brought forward by the Chairman and the members of the board.*

Resolution:

Resolved to approve the suggested NPTEL courses for the academic year 2024-2025.

Item 18.8: *To approve the panel of examiners for question paper setting and evaluation of answer scripts for the even semester of the academic year 2024-2025.*

The Chairman presented the panel of examiners for QP setting, QP Scrutiny and conduct of practical and theory examinations for the academic year 2024-2025.

Resolution:

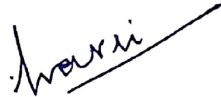
Resolved to approve the panel of examinations for QP setting, QP Scrutiny and conduct of practical and theory examinations are submitted to CoE for exam related work.

Item 18.9: *To consider and approve any other item brought forward by the Chairman and the members of the board.*

No other item was brought forward.

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. S. Gowri, Head and Chairman – Biochemistry BoS.

07.11.2024


(Dr. S. Gowri)

Dr. S. Gowri M.Sc., M.Phil., Ph.D., PGDCL,
Professor & Head
Department of Biochemistry
Dr. N. G. P. Arts and Science College
Colombatore - 641 048.

Syllabus revision
B.Sc. Biochemistry

Faculty: Biosciences
Semester: II

Board: Biochemistry

Course Code/ Name: 24BCU2CP – Enzymology and Microbiology

Unit	Existing	Changes
1.	Isolation and Partial purification of the following enzymes from plant/Microbial sources a). Acid phosphatase b). Amylase c). Urease	
2.	Effect of pH on the activity of any one of the following enzymes: a). Acid: phosphatase b). Amylase c). Urease	
3.	Effect of temperature on the activity of any one of the following enzymes: a). Acid phosphatase b). Amylase c). Urease	
4.	Effect of substrate concentration on the activity of any one of the following enzymes: a). Acid phosphatase b). Amylase c). Urease	Enzyme kinetics studies using online software tools : ICEKAT and Enzo
5.	Separation of isoenzymes by Native PAGE and SDS PAGE (Demonstration)	Enzyme inhibition - calculation of Ki for competitive inhibition.
6.	Enzyme immobilization by sodium alginate method (DBT Star Practical)	
7.	Determination of Molecular weight of enzymes using gel filtration	
8.	Preparation and Inoculation of Culture Media-Solid and Liquid	
9.	Culture transfer techniques: Slid to solid (Streaking), Liquid to solid (spreading), Liquid to liquid, solid to liquid and determination of CFU/ml. (DBT Star Practical)	
10.	Staining techniques- Simple staining, Gram Staining, Negative, spore and Acid-Fast Staining	
11.	Antibiotic sensitivity of bacterial pure culture	
12.	Tests for identification of Bacteria- IMViC, Bacterial Sugar Fermentation, Oxidase, catalase, urease and H ₂ S Production	
13.	Study and plot the growth curve of E. coli by turbidimetric and standard plate count methods (DBT Star Practical)	

PERCENTAGE OF SYLLABUS REVISED: 15 %

COURSE FOCUS ON:

<input checked="" type="checkbox"/>	Skill Development	<input checked="" type="checkbox"/>	Entrepreneurial Development
<input checked="" type="checkbox"/>	Employability	<input checked="" type="checkbox"/>	Innovations
	Intellectual Property Rights		Gender Sensitization
	Social Awareness/ Environment		Constitutional Rights/ Human Values/ Ethics

**Syllabus revision
B.Sc. Biochemistry**

Faculty: Biosciences
Semester: IV
Course Code: 233BC1A4EP

Board: Biochemistry
Course Code/ Name: Bioinformatics

Unit	Existing	Changes
I	Introduction to Bioinformatics Introduction to Computational Biology and Bioinformatics, Definition, history, emerging areas, scope and application of Bioinformatics, Human Genome Project- Science, applications and ELSI. Useful Bioinformatics sites on www. Search Engines, Boolean search ("BUT", "NOT", "AND"). Data retrieval tool – NCBI, Entrez, DBGET and SRS.1. Data retrieval tools and methods- NCBI, PubMed, PMC, ENTREZ and SRS	Data retrieval tool – NCBI, Entrez, DBGET and SRS and Ensembl Data retrieval tools and methods- NCBI, PubMed, PMC, ENTREZ, SRS and Ensembl
II	Biological Databases Nucleic acid sequence databases- EMBL, GEN BANK, DDBJ. Protein databases- SWISS PROT, TrEMBL, PIR, UniProt and Structure databases- PDB. Tools for screening gene mutations – Pmut, Sist. 2. Sequence Database -GEN BANK, SWISSPROT. 3. Structure Databases - PDB	
III	Sequence Alignment Sequence Alignment based on Matrices (BLOSUM and PAM), tools for sequence alignment – BLAST, FASTA, Clustal W, Phylogenetic analysis- WPGMA, UPGMA methods. 4. Sequence similarity searching (NCBI, BLAST and FASTA) 5. Multiple sequence alignment (Clustal) 6. Molecular phylogeny (PHYLIP)	Sequence Alignment - Definition, Local alignment (BLOSUM) and Global alignment (PAM), Pairwise alignment (BLAST and FASTA) and multiple sequence alignment (Clustal W)
IV	Gene identification and prediction Gene identification and prediction-pattern recognition. Protein primary structure analyses and prediction: identification and characterization. 7. Sequence analysis using EMBOSS or GCG Wisconsin Package. 8. Gene structure and function prediction (using GENSCAN, GeneMark) 9. Protein sequence analysis (ExpASY proteomics tools)	8. Gene structure and function prediction (using GENSCAN, GeneMark) and search tool for the retrieval of interacting Genes/Proteins - STRING
V	Drug Discovery Introduction to drug discovery, Structure based drug design- Pharmacophore identification and Mapping, target identification, lead optimization, methods to identify lead compounds, high throughput screening, validation, Molecular Docking - Lipinski's rule 10. Homology Modeling using SPDBV	Lead identification and optimization Molecular Docking - Lipinski's rule- Swiss ADME 10. Downloading a PDB file and visualization of the same using RASMOL 11. Molecular Docking - SwissDock 12. Homology Modeling using SPDBV

PERCENTAGE OF SYLLABUS REVISED: 17 %

COURSE FOCUS ON:

<input checked="" type="checkbox"/>	Skill Development	<input checked="" type="checkbox"/>	Entrepreneurial Development
<input checked="" type="checkbox"/>	Employability	<input checked="" type="checkbox"/>	Innovations
	Intellectual Property Rights		Gender Sensitization
	Social Awareness/ Environment		Constitutional Rights/ Human Values/ Ethics

Syllabus Revision
B.Sc Biochemistry

Faculty: Biosciences
Semester: VI

Board: Biochemistry

Course Code/ Name: : 223BC1A6CA Clinical Biochemistry

Unit	Existing	Changes
I	<p>Disorders of Carbohydrate metabolism and lipid metabolism</p> <p>Disorders of Carbohydrate metabolism: Normal glucose level in blood, renal threshold and regulation of blood glucose concentration. Definition and causes- Hypo and Hyperglycemia; Diabetes mellitus; Introduction, aetiology, types of diabetes mellitus, Acute and chronic complications of Diabetes mellitus. and diagnosis- Urine testing, random blood sugar and GTT. Galactosemia and Glycogen storage diseases and Fructosuria</p> <p>Disorders of lipid metabolism: Plasma lipoproteins-lipoproteinemias, lipid metabolism in liver and adipose tissue. Fatty liver-. Hypo and hypercholesterolemia. Atherosclerosis - aetiology, clinical features and complication.</p>	<p>Sampling of biological material</p> <p>Urine: Volume, pH, colour, specific gravity. Normal Constituents Blood: Normal constituents of blood A brief review of units and abbreviations used in expressing concentrations and standard solutions. Specimen collection (blood and urine), normal and abnormal constituents of urine Normal and abnormal constituents of blood. Other body fluids: CSF, pleural fluid and aspirated fluids.</p> <p>Storage and Transport of biological samples.</p>
II	<p>Disorders of aminoacids, purine, pyrimidine and porphyrin metabolism</p> <p>Disorders of aminoacids metabolism -Etiology and clinical manifestation of phenyl ketonuria, cystinuria, alkaptonuria, Fanconi's syndrome, albinism and tyrosinemia, Disorders of purine, pyrimidine and porphyrin metabolism- Hyperuricemia and gout. Lesch- Nyhan syndrome. Orotic aciduria, porphyrias.</p>	<p>Disorders and Diagnosis of Carbohydrate metabolism</p> <p>Disorders of Carbohydrate metabolism: Normal glucose level in blood, renal threshold and regulation of blood glucose concentration. Diabetes mellitus; Introduction, aetiology, types of diabetes mellitus, Acute and chronic complications of Diabetes mellitus. and diagnosis- Urine testing, random blood sugar and GTT. Galactosemia and Glycogen storage diseases and Fructosuria</p> <p>Disorders of Carbohydrate metabolism: Diagnosis: GCT, HbA1c and GTT;</p>



III	<p>Urine and blood analysis</p> <p>Urine: Normal composition of urine- Volume, pH, colour, specific gravity. Normal Constituents and their variations in pathological conditions-urea, uric acid, creatinine, pigment. Abnormal constituents—glucose, albumin, ketone bodies. Blood: Normal constituents of blood and their variation in pathological conditions—urea, uric acid, creatinine, glucose, bilirubin, total protein; albumin/globulin ratio. A brief review of units and abbreviations used in expressing concentrations and standard solutions. Specimen collection (blood and urine), anti-coagulant and preservatives for blood and urine. Transport of biological samples.</p>	<p>Disorders of lipid metabolism: lipoproteinemias Fatty liver. Hypo and hypercholesterolemia. Atherosclerosis – aetiology, clinical features and complication. Coronary artery disease and Stroke – aetiology. clinical features and complication. Diagnosis- Lipid Profile, Apo A, Apo B, LpA.</p>
IV	<p>Liver Function tests, Renal function tests and Thyroid function tests</p> <p>Liver Function tests-Metabolism of bilirubin, jaundice-types, clinical, features and test based on bile pigments, Serum enzymes, PT. differentiation of three types of jaundice.</p> <p>Renal function tests-Clearance tests-urea, creatinine, PAH test, concentration and dilution tests.</p> <p>Thyroid function tests hypo and hyper thyroidism, Significance and measurement of T3, T4 and TSH-values.</p>	<p>Disorders of aminoacids metabolism –Etiology, clinical manifestation and diagnosis of phenyl ketonuria, cystinuria, alkaptonuria, Fanconi's syndrome, albinism and tyrosinemia, Disorders of purine, pyrimidine and porphyrin metabolism- Hyperuricemia and gout. Lesch- Nyhan syndrome. Orotic aciduria, porphyrias.</p> <p>Homocystinuria</p>
V	<p>Gastric function tests and Clinical enzymology</p> <p>Gastric function tests Collection of gastric contents, fractional test meal, pentagastrin and insulin stimulation tests</p> <p>Clinical enzymology-Definition of Functional and non-functional plasma enzymes. Isozymes and diagnostic tests, enzyme patterns in acute pancreatitis, bone disorders and myocardial infarction.</p>	<p>Liver, Renal and Thyroid function test, Clinical Enzymology</p> <p>Liver Function tests- jaundice-types, clinical features and test based on bile pigments, Serum enzymes, PT. Renal function tests-Clearance tests-urea, creatinine, PAH test. Thyroid function tests-Significance and measurement of T3, T4 and TSH values</p>

PERCENTAGE OF SYLLABUS REVISED: 45 %

COURSE FOCUS ON:

<input checked="" type="checkbox"/>	Skill Development	<input checked="" type="checkbox"/>	Entrepreneurial Development
<input checked="" type="checkbox"/>	Employability		Innovations
	Intellectual Property Rights		Gender Sensitization
	Social Awareness/ Environment		Constitutional Rights/ Human Values/ Ethics

Faculty: Biosciences

Semester: II

Course Code/ Name: 223BC1A6CA Hormonal Biochemistry

Unit	Existing	Changes
I	Introduction to endocrine system Hormones- definition, classification, biosynthesis, circulation in blood, modification and degradation. Mechanism of hormone action, Class I and Class II hormone Receptors- Structural features and regulation. Role of second messengers in hormone action. Feedback regulation of hormones	classification- Chemical nature and mechanism of action.
II	Hypothalamus and pituitary hormones Hypothalamic releasing factors and Pituitary hormones: Biosynthesis, secretion, transport, regulation and biological effects. Hyper and hypo activity of pituitary and hypothalamus- Acromegaly, Dwarfism, Diabetes Insipidus. and hypopituitarism	
III	Thyroid and Parathyroid hormones Biosynthesis, secretion, transport, regulation and biological effects of thyroid hormones. Hypo and hyperthyroidism. Anti thyroid agents. Role of parathyroid hormones, calcitonin, Calcitriol maintaining calcium and phosphorus homeostasis. Hypo and hyper parathyroidism.	
IV	Hormones of pancreas Pancreas -Islets of Langerhans- cell types, biosynthesis, mechanism of action and biological effects of Insulin and Glucagon. Disorders of hypo and Hyper secretion of pancreas. Gastro intestinal hormones. Adipocyte hormones: Adiponectin and leptin; Appetite and satiety control. Happy Hormones: Biological effects	
V	Biosynthesis, secretion, transport, biological effects, mechanism of action of adrenal cortical and medullary hormones. Pathophysiology of adrenal gland secretions- Hypo and hyper state conditions Male and female sex hormones. Interplay of hormones during ovarian and uterine phases of menstrual cycle; Placental hormones; role of hormones during parturition and lactation. Hormone based contraception. Reproductive hormone disorders- Menorrhagia, Menorrhagia, Premenstrual syndrome, Polycystic Ovary Syndrome, Menopause	

PERCENTAGE OF SYLLABUS REVISED: 6 %

COURSE FOCUS ON:

<input checked="" type="checkbox"/>	Skill Development	<input checked="" type="checkbox"/>	Entrepreneurial Development
<input checked="" type="checkbox"/>	Employability		Innovations
	Intellectual Property Rights		Gender Sensitization
	Social Awareness/ Environment		Constitutional Rights/ Human Values/ Ethics

Syllabus Revision
B.Sc Biochemistry

Faculty: Biosciences

Board: Biochemistry

Semester: VI

Course Code/ Name: 223BC1A4CP: Clinical and Hormonal Biochemistry

S.No	Course Content
1	Estimation of blood glucose by Ortho-toluidine method
2	Glucose tolerance test
3	Estimation of Total protein in serum by Biuret Method
4	Estimation of Cholesterol in serum by Zak's method
5	Serum lipid profile - kit method
6	Estimation of Urea by DAM TSC method
7	Estimation of SGOT activity in Serum
8	Estimation of SGPT activity in Serum
9	Estimation of Alkaline phosphatase activity in serum
10	Estimation of creatinine in urine by picric acid method
11	Estimation of serum Ca ²⁺
12	Estimation of serum TSH, T3 and T4
13	HCG based pregnancy test
14	Estimation of serum electrolytes

PERCENTAGE OF SYLLABUS REVISED: 100 %
COURSE FOCUS ON

<input checked="" type="checkbox"/>	Skill Development	<input checked="" type="checkbox"/>	Entrepreneurial Development
<input checked="" type="checkbox"/>	Employability		Innovations
	Intellectual Property Rights		Gender Sensitization
	Social Awareness/ Environment		Constitutional Rights/ Human Values/ Ethics

Syllabus Revision

B.Sc Biochemistry

Faculty: Biosciences

Board: Biochemistry

Semester: VI

Course Code/ Name: 223BC1A6SA/MOLECULAR DIAGNOSTICS

Unit	Existing	Changes
I	<p>Basics of Molecular Diagnostics Introduction and history of diagnostics, Diseases-infectious, physiological and metabolic errors; genetic basis of diseases-inherited diseases; traditional methods for the diagnosis of metabolic errors. Genetic disorders: Classification of genetic disorders, Single gene Disorders-Sickle cell anaemia, Duchenne muscular Dystrophy, Retinoblastoma, Cystic Fibrosis and Marfan's syndrome Multifactorial disorders-Diabetes, Atherosclerosis, Schizophrenia (14)</p>	<p>Applications in various medical field. Cytogenetic testing- Karyotyping, Comparative genomic hybridization (CGH), Chromosomal microarray analysis, Chromosomal microarray analysis and Chromosome banding analysis. Fluorescence insitu hybridization. (7) Practical: Karyotyping, chromosome banding analysis</p>
II	<p>Tests for genetic disorders Disease identification and tests for following genetic disorders- Thalassemia, Faneoni anemia, Sickle Cell anemia, Fragile X syndrome, Alzheimer's disease, Duchenne Muscular Dystrophy/Becker's Muscular Dystrophy, Huntington's disease (8) Allelic susceptibility test for multifactorial disorders (Neural Tube Defect, Cleft Lip and Palate, Cardio Vascular Disorder, Male infertility)</p>	<p>Diagnosis of Genetic Disorder Strategy of Genetic Testing- Family History, Pedigree chart, Biochemical analysis and samples used. Samples used for Genetic disorder testing. Sequencing based diagnosis: Whole genome sequencing (WGS), Multiplex Ligation dependent Probe Amplification (MLPA), (6) Practical: Case study for history and pedigree analysis. Sequencing demo</p>
III	<p>Applications of PCR in diagnosis Applications of PCR- PCR based microbial typing: Eubacterial identification based on 16S rRNA sequences- Amplified Ribosomal DNA Restriction analysis (ARDRA)- Culture independent analysis of bacteria- DGGE and TRFLP. Molecular diagnosis of fungal pathogens based on 18S rRNA sequences- Detection of viral pathogens through PCR. RAPD for animal and plants. PCR in forensic science- AmpFLP, STR, Multiplex PCR- Determination of Paternity- Human identification and sex determination (5)</p>	<p>of diseases Application of metagenomics. (1) Practical: RT PCR</p>
IV	<p>Immunodiagnosics Immunodiagnosics - Introduction, antigen-antibody binding interactions and assays; Immunohistochemistry assay - Detection of Breast cancer, colon cancer and detection of Hepatitis B infection. Automated DNA sequencing- Principles, Methods and Instrumentation- Advances in DNA sequencing- New Generation sequencing Methods, Pyrosequencing- Microarrays- Personalized Medicine- Pharmacogenomics (5)</p>	

V	Prenatal and pre-implantation diagnosis Risk evaluation (Mendelian risk, empirical risk), Prenatal and pre-implantation diagnosis. Noninvasive: Triple test, Ultrasonography (USG), Invasive: Amniocentesis (AC), chorionic villi sampling (CVS), Fetal blood sampling (FBS), Population screening for genetic disorders, Treatment and management of genetic disorders Genetic Counseling, Ethical and legal issues in genetic counseling	
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PERCENTAGE OF SYLLABUS REVISED: 77%

<input checked="" type="checkbox"/>	Skill Development	<input checked="" type="checkbox"/>	Entrepreneurial Development
<input checked="" type="checkbox"/>	Employability		Innovations
	Intellectual Property Rights		Gender Sensitization
	Social Awareness/ Environment		Constitutional Rights/ Human Values/ Ethics

Syllabus Revision
B.Sc. Biochemistry

Faculty: Biosciences
Semester: VI

Board: Biochemistry

Course Code/ Name: 223BC1A6DA - Neurobiochemistry

Unit	Existing
I	Morphogenesis of central nervous system and Histology of the Nervous System Structure and functions of central nervous system: The brain and the spinal cord. Structure and functions of Peripheral Nervous System Structure and functions of neuron. Types of neurons: multipolar, bipolar, pseudo-unipolar and unipolar. Neuroglia: astrocytes, oligodendrocytes, microglia, and ependymal cells. Myelinated axons.
II	Functions of Nervous System Neuron, Sensory Receptors, Effectors, information processing, memory. Structure and permeability of neuronal membrane: membrane transport proteins, mode of transport, synapse: types (chemical and electrical), Physiologic Anatomy of the Synapse: Presynaptic Terminals, resting membrane potential, Action Potential and propagation, equilibrium membrane potential, Ion Channels (properties and classification), Second Messenger system, Excitation/inhibition in post synaptic membrane.
III	Neurotransmitters Neurotransmitters: definition, properties, classes, mechanism of neurotransmitter release. Synthesis, release, physiological and clinical considerations of acetyl choline, GABA, dopamine, nor epinephrine, epinephrine, serotonin, histamine, nitric oxide and novel neurotransmitters. Receptors: nicotinic acetyl choline, NMDA and opioid receptors. Mechanisms of Regulation of Receptors: Desensitization and Down-Regulation.
IV	Visual, Olfaction and Taste system Visual system: components of eye, cells of cons and rod, different layers of eye, photoreceptors, photo transduction, visual cycle. Olfaction and Taste: organization, receptors, sensory transduction, central pathways for olfaction and taste.
V	Neurological diseases Pathophysiology, clinical intervention and Management of neurological diseases: Alzheimer's disease, Parkinson's disease, Schizophrenia, Huntington's disease, Epilepsy and Depression disorder.

PERCENTAGE OF SYLLABUS REVISED: 100 %
COURSE FOCUS ON:

<input checked="" type="checkbox"/> Skill Development	<input type="checkbox"/> Entrepreneurial Development
<input checked="" type="checkbox"/> Employability	<input checked="" type="checkbox"/> Innovations
<input checked="" type="checkbox"/> Intellectual Property Rights	<input type="checkbox"/> Gender Sensitization
<input type="checkbox"/> Social Awareness/ Environment	<input type="checkbox"/> Constitutional Rights/ Human Values/ Ethics

**Syllabus Revision
B.Sc Biochemistry**

Faculty: Biosciences

Board: Biochemistry

Semester: VI

Course Code/ Name: 223BC1A6DB – Marine Biochemistry

Unit	Existing
I	Physiology of digestion and Respiration Digestion and absorption. Digestive enzymes and their role with food habits. Respiratory structures and functions - factors affecting respiration, Role of transport of O ₂ and CO ₂ , Adaptations to hypoxia and anoxia.
II	Dissolved gases, Marine sediments & Chemical composition of seawater Carbon dioxide system and oxygen in the sea, hydrogen sulphide and noble gases - methane. Origin and physical properties of sediments, classification of marine sediments. Chemical composition of seawater: Ionic composition of seawater, major and minor constituents, trace elements, their importance and distribution; Concept of chlorinity and salinity; Nitrogen, phosphorus and silicon cycles.
III	Endocrine systems and Osmoregulation Physiology of Endocrine system, hormones of reproduction in fin fishes and shell fishes. Moulting in crustaceans. Physiology of ionic and osmoregulation - ions in body fluids, mechanism of ionic regulation, responses to osmotic conditions, types of osmoregulatory adaptations. Biochemistry and physiology of Osedax worms, hagfish, polar fish.
IV	Marine biology & Biochemical constituents Introduction and history of marine science. Biochemical Composition of raw fish and algae. The nutritive and medicinal value of fish and algae: Protein, fat, carbohydrates, moisture, ash, oils, minerals, vitamins etc; Nutritional value of preserved and processed fish and algae.
V	Marine natural products & Human Impact on Marine Ecosystems Bioactive compounds from marine algae, isolation and mode of action. Eicosonoids and related compounds from marine algae. Medicinal uses marine algae. Cultivation of marine Algae. Human Impact on Marine Ecosystems: Pollution (plastics, heavy metals) and overfishing, and their biochemical implications

PERCENTAGE OF SYLLABUS REVISED: 100 %

COURSE FOCUS ON:

<input checked="" type="checkbox"/>	Skill Development	<input type="checkbox"/>	Entrepreneurial Development
<input checked="" type="checkbox"/>	Employability	<input checked="" type="checkbox"/>	Innovations
<input checked="" type="checkbox"/>	Intellectual Property Rights	<input type="checkbox"/>	Gender Sensitization
<input type="checkbox"/>	Social Awareness/ Environment	<input type="checkbox"/>	Constitutional Rights/ Human Values/ Ethics

New Syllabus

B.Sc. Biochemistry

Faculty: Biosciences

Board: Biochemistry

Semester: VI

Course Code/ Name: DSE-II: Sports Biochemistry (223BC1A6DC)

Unit	Syllabus
I	Sports, Exercise & Games Introduction, calisthenics, Gymnastics, combative and swimming; Yogasana and its importance – Padmasana, Vajrasana, Dhanurasana, and Suryanamaskar; Track and field events – Running and Jumping Team events –Kabaddi.
II	Skeletal Muscle System & Metabolic Systems in Exercise Skeletal muscle types relation with different types of activities; strength, power and endurance of muscles. Muscle metabolic systems in exercise: Recovery of muscle metabolic systems after exercise. Role of hormones in skeletal muscle metabolism.
III	Cardio Respiratory Systems Muscle blood flow and cardiac output during exercise; Oxygen consumption and pulmonary ventilation in exercise; Hypoxia and hypercapnia. Hormones involved in cardio respiratory systems.
IV	Physical Fitness Assessment Body composition; body fat percentage by skin fold method, BMI; Ideal height, weight assessment of muscle mass based on age.
V	Nutrition for Sports and Exercise Nutritional considerations for sports person: Carbohydrate - Energy source for sports and exercise; carbohydrates composition for pre-exercise, during and recovery period. Fat - Role as an energy source; effect of fasting and fat ingestion. Protein - Protein requirement during exercise, recovery process and protein supplement. Vitamins - Role of B-complex vitamins. Minerals - Role of Potassium and sodium.

PERCENTAGE OF SYLLABUS REVISED: 100 %

COURSE FOCUS ON:

<input checked="" type="checkbox"/>	Skill Development	<input type="checkbox"/>	Entrepreneurial Development
<input checked="" type="checkbox"/>	Employability	<input type="checkbox"/>	Innovations
<input type="checkbox"/>	Intellectual Property Rights	<input type="checkbox"/>	Gender Sensitization
<input type="checkbox"/>	Social Awareness/ Environment	<input type="checkbox"/>	Constitutional Rights/ Human Values/ Ethics

Syllabus revision

B.Sc Biochemistry

Faculty: Biosciences

Board: Biochemistry

Semester: VI

Course Code/ Name: Pharmaceutical Biochemistry 223BC1A6DD

Unit	Existing	Changes
I	<p>Introduction, Pharmacodynamics and Kinetics Introduction and History of Drugs, Classification, routes of drug administration, passage of drugs across biological membrane, binding of drugs to plasma proteins. Absorption, Metabolism, Distribution and Elimination (ADME) of drugs, factors influencing drug absorption and elimination of drugs. Toxicity assessment: acute, sub chronic, chronic exposure.</p>	
II	<p>Receptor Concept Definition of Receptor, Agonist and Antagonist, Drug receptor interaction. Receptor types - G-protein coupled receptor, Receptors with intrinsic ion channel, Enzymatic receptors, receptors regulating gene expression. Isolation of receptors, consequences of drug receptor interaction, binding forces in drug receptor interaction.</p>	
III	<p>Drug Metabolism and Elimination Phase I and Phase II reactions. Metabolism via hydroxylation, N-Oxidation, azo and nitro reduction, Oxidative deamination, purine oxidation, dehalogenation, hydrolysis, action of choline esterase. Physiological importance of xenobiotic metabolism. Elimination of drugs from the body with reference to renal system.</p>	
IV	<p>Chemotherapy and Plant derived drugs Chemotherapy: Mode of action of sulfonamides, anti-metabolites of folate, purines and pyrimidines. Mode of action of Antibacterial - ampicillin, tetracycline and erythromycin; Antifungal agents - undecylenic acid and amphotericin; Antiviral - Acyclovir, Zidovudine, Interferon; Antimalarial - Chloroquine and Amodiaquine; Anti-tubercular drugs - Streptomycin and rifampicin. Cancer chemotherapy- Cytotoxic drugs Immunosuppressive drug therapy: Natural products: Alkaloids - cocaine, nicotine, quinine, atropine; Terpenoids - terpenoid, menthol, diterpene; Flavonoids - anthocyanin. Concept of Personalized medicine.</p>	<p>Cytotoxic drugs - 5 Fluorouracil drug and Cyclophosphamide</p>
V	<p>Drugs acting on CNS, Cardiovascular, GI tract and ADR CNS - mode of action of barbiturates, salicylates, MAO inhibitors and drugs for Parkinson's and alzheimers disease with an example. Cardio-vascular disease - mode of action of diuretics, ACE inhibitors- nitroglycerin, β blockers, aldosterone antagonists, heparin, cardiac glycosides with an example. GI tract - mode of action of antacids, drugs for peptic ulcer, diarrhea and constipation with an example. Adverse responses and side effects of drugs: Allergy, drug intolerance, drug addiction, drug abuses and their biological effects.</p>	

PERCENTAGE OF SYLLABUS REVISED: 15 %

COURSE FOCUS ON:

<input checked="" type="checkbox"/>	Skill Development		Entrepreneurial Development
<input checked="" type="checkbox"/>	Employability	<input checked="" type="checkbox"/>	Innovations
<input checked="" type="checkbox"/>	Intellectual Property Rights		Gender Sensitization
	Social Awareness/ Environment		Constitutional Rights/ Human Values/ Ethics

Syllabus revision
B.Sc. Biochemistry

Faculty: Biosciences
Semester: VI

Board: Biochemistry

Course Code/ Name: : 223BC1A6DE -Bioprocess Technology

Unit	Existing
I	Introduction to fermentation technology Isolation and screening of industrially important microbes, Inoculum preparation, strain improvement for better yield. Fermentation-Submerged and solid-state fermentation, Bioreactors - types, parts and their functions - optimization conditions, aeration, agitation, foam control process control equipment's.
II	Downstream Processing Introduction, removal of microbial cells and solid matter, foam separation, precipitation, filtration, centrifugation, cell disruption, liquid extraction, chromatography, membrane process. Drying and crystallization.
III	Industrial applications of microbes Industrial production of alcohol (butanol, ethanol, glycerol), alcoholic beverages - Wine and Beer. Microbes in mineral recovery - Bioleaching and Biosorption, Production of Biomass, Production of Single cell protein and Mushrooms.
IV	Microbial production of bioactive compounds Production of bacterial and fungal polysaccharide, Biosynthesis of Peptidoglycan, Industrial Production of Penicillin and streptomycin. Vitamins - B12 and riboflavin. Production of aminoacids (lysine, glutamic acid, arginine, threonine). Organic acids (acetic acid, citric acid, lactic acid)
V	Microbial Products in Food, Environment and Agriculture Industry Production, harvest, recovery and uses - Baker's yeast, milk products. Effluent treatment -BOD, COD and disposal of effluents. Bioconversion of Methane or CO2 to edible protein production. Formulation of Biofertilizer (Rhizobium, Pseudomonas) and Biopesticides (Bacillus thuringiensis)

PERCENTAGE OF SYLLABUS REVISED: 100 %

COURSE FOCUS ON:

<input checked="" type="checkbox"/> Skill Development	<input checked="" type="checkbox"/> Entrepreneurial Development
<input checked="" type="checkbox"/> Employability	<input checked="" type="checkbox"/> Innovations
<input checked="" type="checkbox"/> Intellectual Property Rights	Gender Sensitization
Social Awareness/ Environment	Constitutional Rights/ Human Values/ Ethics

**Syllabus Revision
B.Sc Biochemistry**

Faculty: Biosciences

Board: Biochemistry

Semester: VI

Course Code/ Name: 223BC1A6DF - BIORESOURCES AND BIOPROSPECTING

Unit	Existing	Changes
I	Introduction to Bioresources and Bioprospecting Bioresources- Classification and taxonomy; Biodiversity: Components of biodiversity (genetic diversity, population level diversity, species diversity) and Importance. Bioprospecting: Definition, Introduction, Phases of Bioprospecting. Chemical prospecting, Bionic prospecting and Gene prospecting	-
II	Plant Bioprospecting Medicinal and Aromatic plants: Separation of secondary metabolites, Authentication and preservation of plant specimens. Drugs derived from plants: Antitumor agent - Etoposide, Vinblastine, Vincristine. Cardiotonic – Convallatoxin, Acetyldigoxin. Antiinflammatory – Aescin, Bromelain. Choleraetics – Curcumin.	-
III	Marine and Microbial Bioprospecting Marine Bioprospecting: Sources of marine planktons, Isolation and cultivation of Marine Yeast and its industrial applications. Isolation of bioactive chemicals from Seaweeds and their applications Microbial Bioprospecting: Sources of microbial origin and its bioprospecting for industrial enzymes, bioprospecting novel antifoulants and anti-biofilm agents from microbes.	-
IV	Bioprospecting and Drug discovery Drug discovery in traditional medicine, Modern tools in drug discovery, Natural Product Activity and Species Source Database, ADME - Lipinski's rule-Swiss ADME, Molecular Docking - SWISS DOCK, AUTODOCK	-
V	Regulations for Bio prospected products Bioprospecting Act: Introduction, Regulatory legislation and convention in Bioprospecting, Exemption to Act. Product development procedures and policies: Approval and IPR, protection policies of Bioprospecting.	-

PERCENTAGE OF SYLLABUS REVISED: 100 %

COURSE FOCUS ON:

<input checked="" type="checkbox"/>	Skill Development		Entrepreneurial Development
<input checked="" type="checkbox"/>	Employability	<input checked="" type="checkbox"/>	Innovations
<input checked="" type="checkbox"/>	Intellectual Property Rights		Gender Sensitization
	Social Awareness/ Environment		Constitutional Rights/ Human Values/ Ethics

Course Code/ Name: 223BC1A6AA - Innovation, IPR & Entrepreneurship

Unit	Existing	Changes
I	Introduction Meaning of Creativity, Invention and Innovation - Types of Innovation - Relevance of Technology for Innovation - Introduction and the need for Intellectual Property Right (IPR) - Kinds of IPR - National, IPR Policy.	International
II	Patent Introduction and origin of Patent System in India- Conceptual Principles of Patent Law in India - Process for obtaining patent - Rights granted to a Patentee -Infringement of Patent. Case Study: When-Google-was-used-for-Patent-Infringement	Validity of patent Apple Inc. v. Samsung Electronics Co. Ltd. (2020)
III	Trademarks Origin of Trade Marks System - Types - Functions - Distinctiveness and Trademarks -- Meaning of Good Trademark - Rights granted by Registration of Trademarks -Infringement of trademark. Case Study: Trademark-mismanagement-by-Gadbury's	Merck v. Mylan Pharmaceuticals (2016)
IV	Copyright Introduction and Evolution of Copyright - Objectives and fundamentals of Copyright Law - Requirements for Copyrights - Works protectable under Copyrights - Authorship and Ownership - Rights of Authors and Copyright owners - Infringement of Copyright. Case Study: Copyright-Case-of-Napster-and-Grokster.	J.K. Rowling and Warner Bros. v. Steve Vander Ark (2007)
V	Geographical Indications Introduction and Concept of Geographical Indications - History - Administrative Mechanism - Benefits of Geographical Indications - Infringement of registered Geographical Indication. Case Study:The-story-of-the-Tirupati-Laddu.	Darjeeling Tea v. Tea Board of India (2012)

PERCENTAGE OF SYLLABUS REVISED: 26 %

COURSE FOCUS ON:

<input checked="" type="checkbox"/>	Skill Development	<input checked="" type="checkbox"/>	Entrepreneurial Development
<input checked="" type="checkbox"/>	Employability	<input checked="" type="checkbox"/>	Innovations
<input checked="" type="checkbox"/>	Intellectual Property Rights		Gender Sensitization
	Social Awareness/ Environment		Constitutional Rights/ Human Values/ Ethics

**Syllabus Revision
M.Sc. Biochemistry**

Faculty: Biosciences

Board: Biochemistry

Semester: II

Course Code/ Name: 24BCP2CQ / Microbial Biochemistry and Metabolism

Unit	Existing	Changes
1.	Determination of microbial growth-turbidity method	
2.	Biochemical Characterization of Bacteria IMViC test, Hydrogen sulphide Biochemical Characterization of Bacteria IMViC test, Hydrogen sulphide test, Oxidase test, Catalase test, Urease test, Nitrate reduction test, Triple sugar Iron agar test.	Production of extracellular metabolites- Melanin from actinomycetes
3.	Determination of Antibiotic Sensitivity:	Antibiotic producing microorganisms by crowded plate technique
4.	Production and assay of amylase activity by shake flask method by batch fermentation	
5.	Production and estimation of red wine from grapes.	
6.	Production and estimation of acetic acid by Aspergillus niger	
7.	Estimation of Glucose by DNS Method.	
8.	Estimation of pyruvate by DPNH (2, 4-dinitrophenylhydrazine) method.	
9.	Estimation of Methionine.	
10.	Estimation of Protein by Bradford's method	
11.	Estimation of MDA as an index of Lipid Peroxidation.	
12.	Estimation of Lipoproteins.	
13.	Estimation of Iron by Wong's Method.	

PERCENTAGE OF SYLLABUS REVISED: 15%

COURSE FOCUS ON:

<input checked="" type="checkbox"/>	Skill Development	<input checked="" type="checkbox"/>	Entrepreneurial Development
<input checked="" type="checkbox"/>	Employability	<input checked="" type="checkbox"/>	Innovations
<input checked="" type="checkbox"/>	Intellectual Property Rights		Gender Sensitization
	Social Awareness/ Environment		Constitutional Rights/ Human Values/ Ethics

Syllabus revision

M.Sc. Biochemistry

Faculty: Biosciences

Board: Biochemistry

Semester: II

Course Code/ Name: Core Practical: Immunology and Molecular Biology (24BCP2CP)

S.No	Existing	Changes
1	Raising of antibodies in animal model and isolation	Isolation of Immunoglobulin Y (IgY) from chicken eggs
2	Partial purification of antibodies- Ammonium sulphate precipitation and Dialysis	
3	Precipitin Ring Test	Isolation of lymphocytes from blood
4	Detection of antigens / antibodies by ELISA technique (CMIA, ECLIA-Industrial Visit)	
5	Immuno-electrophoresis of antigens	
6	Precipitation reaction - Single and Double Immunodiffusion	
7	Latex agglutination test- widal Test.	
8	Blood smear identification of leucocytes by Giemsa staining	
9	Isolation of chromosomal DNA from bacterial culture and separation on agarose gel electrophoresis.	Isolation of chromosomal DNA from blood, quantification of DNA and separation of DNA on agarose gel electrophoresis.
10	Isolation of plasmid DNA from bacterial culture and separation on agarose gel electrophoresis.	
11	Isolation of total RNA from yeast/ <i>E. coli</i> and separation on agarose gel electrophoresis.	
12	Transformation of <i>E. coli</i> cells with plasmid DNA and Blue or white colony test for lac ⁺ /lac ⁻	
13	Effect of UV dose on survival rate of bacteria	
14	Determination of DNA damage by comet assay	
15	Karyotyping (demonstration)	

PERCENTAGE OF SYLLABUS REVISED: 40 %

<input checked="" type="checkbox"/>	Skill Development	<input checked="" type="checkbox"/>	Entrepreneurial Development
<input checked="" type="checkbox"/>	Employability	<input checked="" type="checkbox"/>	Innovations
<input checked="" type="checkbox"/>	Intellectual Property Rights		Gender Sensitization
	Social Awareness/ Environment		Constitutional Rights/ Human Values/ Ethics



Dr. N.G.P. ARTS AND SCIENCE COLLEGE

(An Autonomous Institution, Affiliated to Bharathiar University, Coimbatore)
 Approved by Government of Tamil Nadu & Accredited by NAAC with 'A++' Grade (3rd Cycle-3.64 CGPA)
 Dr. N.G.P.-Kalapatu Road, Coimbatore-641 043, Tamil Nadu, India.
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BoS

18th

ATTENDANCE OF THE EIGHTEENTH BOARD OF STUDIES MEETING

Faculty: Bioscience
 Venue: Innovation Centre

Name of Board: Biochemistry
 Date: 07/11/2024, Time: 10.00 a.m

The following members were present for the board of studies meeting

S. NO.	NAME	DESIGNATION	SIGNATURE
1	Dr. Gowri S Professor and Head, Department of Biochemistry, Dr. N.G.P. ASC	Chairman	
2	Dr. A. Vijaya Anand Professor, Dept. of Human Genetics and Molecular Biology, Bharathiar University, Coimbatore- 641046	VC nominee	
3	Dr. Kalaiselvi Senthil Associate Professor Department of Biochemistry, Biotechnology and Bioinformatics Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore -641043	Subject Expert	
4	Dr. D. Amirtham Associate Professor (Biochemistry) Department of Plant Biotechnology Centre for Plant Molecular Biology and Biotechnology TamilNadu Agricultural University, Coimbatore	Subject Expert	Absent
5	Dr. E. Santhini Senior Scientific Officer- B/ Technical Manager Centre of Excellence for Medical Textiles The South India Textile Research Association Coimbatore-641014	Industrial Expert	Absent
6	Dr. S. Vadivel HOD of Clinical Biochemistry and Quality Control System K.G. Hospital, Coimbatore- 641018	Alumni	
7	Dr. N. Kuppuchamy Department of Tamil, Dr. N.G.P. ASC	Co-opted Member	
8	Dr. A. Hazel Verbina Department of English, Dr. N.G.P. ASC	Co-opted Member	
9	Dr. K. Girija Department of Physics, Dr. N.G.P. ASC	Co-opted Member	



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10	Dr. S. Uma Department of Computer Science, Dr.N.G.P. ASC	Co-opted Member	<i>Must 8/11/24</i>
11	Dr.N.Kannikaparameswari Department of Biochemistry, Dr. N.G.P. ASC	Member	<i>K. Kannika 7/11/24</i>
12	Dr.T.Indhumathi Department of Biochemistry, Dr. N.G.P. ASC	Member	<i>T. Indhu 7/11/24</i>
13	Dr.K.Rajathi Department of Biochemistry, Dr. N.G.P. ASC	Member	<i>Dr. K. Rajathi</i>
14	Ms. M. Vidhya Shree II M.Sc Biochemistry	Student Representative	<i>Ms. Vidhya</i>
15	Ms. Yashmitha R III B.Sc Biochemistry	Student Representative	<i>Yashmitha</i>

Date : 07/11/2024

Chairman

(Dr.S.Gowri)
Chairman, BoS Biochemistry

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

