



**KONGU ARTS AND SCIENCE COLLEGE**  
**(Autonomous)**



Affiliated to Bharathiar University, Coimbatore

Approved by UGC, AICTE, New Delhi & Re Accredited by NAAC, DBT STAR College Scheme

(An ISO 9001 :2015 Certified Institution)

**NANJANAPURAM, ERODE – 638 107**

## **MINUTES**

**Meeting of the Board of Studies held on 15.04.2025**



## DEPARTMENT OF BIOCHEMISTRY

### BOARD OF STUDIES MEETING

#### AGENDA

**DATE: 15.04.2025**

1. To consider and approve the Scheme of Examination and Syllabi of V & VI Semesters for the UG students admitted during the academic year 2023-2024 onwards.
2. To consider and approve the continuation of the Scheme of Examination and Syllabi of I & II, III & IV Semesters for the UG and PG students admitted during the academic year 2025-2026 and 2024-2025 respectively.
3. To consider and approve the continuation of the provision of Extra Credits for NCC cadets for the students admitted during the academic year 2023-2024 and onwards.
4. To consider and approve the inclusion of additional name in the Panel of Examiners for Question Paper Setting and Central Valuation.
5. To consider and discuss any other subjects with the permission of the chair.



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The meeting of the Board of Studies in BIOCHEMISTRY (UG and PG) was conducted on 15.04.2025 at 10.30 a.m. in Biochemistry department

The following members were present:

Chairman : **Dr. A. K. VIDYA**

Members:

1. Mr. R. RASU (Senior Faculty)
2. Dr. N. SANGEETHA (Senior Faculty)
3. Dr. T. PALVANNAN (University Nominee)
4. Dr. B. RAMESH (Subject Expert)
5. Dr. K. CHANDRAKUMAR (Subject Expert)
6. Dr. M. SARAVANAKUMAR (Industrial Expert)
7. Dr. JAYAPRAKASH NATARAJAN (Alumni Representative)
8. Mr. S. NATARAJAN (Faculty Member)
9. Dr. G. KARTHIKEYAN (Faculty Member)
10. Mr. T. G. NAGULAN (Faculty Member)
11. Dr. P. KOUSALYA (Faculty Member)

Subject related to CBCS, Outcome Based Education, Panel of Examiners were discussed and the following are the resolutions:

1. It is resolved to approve the Scheme of Examination and Syllabi of V and VI Semesters for the B.Sc Biochemistry students admitted during the academic year 2023-2024 and onwards.
2. It is resolved to approve that there is no change in the Scheme of Examination and Syllabi of III and IV Semesters for the B.Sc Biochemistry students admitted during the academic year 2024-2025 and onwards.
3. It is resolved to approve that there is no change in the Scheme of Examination and Syllabi of I and II Semesters for the B.Sc Biochemistry students admitted during the academic year 2025-2026 and onwards.
4. It is resolved to approve that there is no change in the Scheme of Examination and Syllabi of III and IV Semesters for the M.Sc Biochemistry students admitted during the academic year 2024-2025 and onwards.
5. It is resolved to approve that there is no change in the Scheme of Examination and Syllabi of I and II Semesters for the M.Sc Biochemistry students admitted during the academic year 2025-2026 and onwards.
6. It is resolved to approve the continuation of the Part I course: Tamil / Other languages and Part II course: English of III and IV Semesters for the UG students admitted during the academic year 2024-2025 and onwards.
7. It is resolved to approve the continuation of the self-study course I: Gender Studies in III Semester and self-study course II: Fundamentals of Yoga in IV Semester for the UG students admitted during the academic year 2024-2025 and onwards.
8. It is resolved to approve the continuation of the Grade system for Institutional / Internship Training for UG and PG students admitted during the academic year 2023-2024 and onwards.
9. It is resolved to approve the continuation of the provision of Extra Credits for NCC cadets for the students admitted during the academic year 2023-2024 and onwards.
10. It is resolved to approve the inclusion of additional name in the Panel of Examiners for Question Paper Setting and Central Valuation.

**Details of modifications in the Courses offered under the Programme**

**B.Sc Biochemistry**

The following modifications are done in the Scheme of V and VI Semesters for the B.Sc Biochemistry students admitted during the academic year 2023-2024 and onwards.

- Semester wise Practicals implemented as **Core Biochemistry Practicals V** and **Core Biochemistry Practicals VI** in the V and VI Semesters respectively
- The Elective I - **Microbial Genetics** offered in the V Semester is **removed** from the scheme of the examination
- The Elective I - **Bioprocess Technology** has been **introduced** instead of Elective I - Microbial Genetics in the V Semester
- The Core Paper XIII – **Fundamentals of Immunology** has been **shifted** to the Semester V as **Skill Based Course III** instead of Nutritional Biochemistry (*This course is already shifted to semester II*)
- The Elective II - **Bioinformatics Practicals** has been shifted to **Elective III** instead of Elective Paper III - Project in the VI Semester
- The Core Paper XII - **Plant Biochemistry and Plant Therapeutics** in Semester VI has been offered as **Elective II** in the VI Semester.
- The Elective Paper III - **Project** in Semester VI has been offered as **Core XI** in the VI Semester.

The topics of Indian Knowledge System (IKS) incorporated in the courses are given in the Annexure-b and the Topic wise modifications in the Courses are given in the Annexure-c

## Details of modifications with IKS topics in the Syllabus

S. No	Course code	Name of the Course	Unit	New content introduced
1	23UAPCT501	Human Physiology and Medical Terminology	Unit 1	Concept of Tridosha in Ayurveda: Overview of Vata, Pitta, and Kapha doshas and their role in regulating major physiological functions across body systems.
2	23UAPCT502	Clinical Biochemistry	Unit 1	Traditional Systems of Medicine: Alternative medicine for diabetes - Herbal remedies & Supplements
3	23UAPCT503	Molecular Biology	Unit 5	Epigenetic influence of traditional Indian herbs: Indian Herbs with Epigenetic Influence
4	23UAPET505	rDNA Technology	Unit 4	Plant grafting techniques in ayurveda: Sandhana, Ankurārpaṇa, Agnisamyoγa and Pratibandhana
5	23UAPET507	Bioprocess Technology	Unit 2	Difference between traditional Fermentation Techniques and Modern Bioprocess Application, Biotransformation of Phytochemicals as Herbal Products
6	23UAPST508	Fundamentals of Immunology	Unit 5	Traditional Indian Vaccination Practices: An Overview
7	23UAPAL509	Advanced Learners Course III - Cancer Biology	Unit 5	Cytotoxic Effects of Herbs: <i>Withania somnifera</i> and <i>Curcuma longa</i>
8	23UAPAL510	Advanced Learners Course IV - Entrepreneurship Development in Life Sciences	Unit 4	Healing Herbs for Terrace Cultivation: Holy Basil, Sage, Methi & Thyme
9	23UAPCT601	Medicinal Biochemistry	Unit 5	Folk and classical streams of medical knowledge in India: Folk & Tribal Medical Practices, Home remedies, Bone setting, Poison Healers.
10	23UAPET604	Plant Biochemistry and Plant Therapeutics	Unit 3	Agriculture in ancient India: Traditional methods for Pest control and manure in plants.
11	23UAPET605	Environmental Biochemistry	Unit 5	Ayurvedic Environmental Practices with Biochemical Relevance: Agnihotra, Use of Medicinal Plants in Detoxification, Panchagavya and Ayurvedic Shodhana
12	23UAPET606	Hormonal Biochemistry	Unit 5	Ayurvedic Herbs: Influence of Ayurvedic formulations to endocrine systems and Hormonal Disorders
13	23UAPET609	Biostatistics	Unit 5	Ayurveda in Biostatistics: Classification of Prakriti Analysis, Herbal Drug Standardization.
14	23UAPST610	Bioinformatics	Unit 5	Bioinformatics Tools and Databases in Ayurveda: Ayurgenomics Database, AYUSH Research Portal and Public omics databases (NCBI, EMBL) used for Ayurvedic research

## Details of modifications with specific topics in the Syllabus with % revision

S. No	Course code	Name of the Course	New content introduced	Topics removed	% of Revision
1	23UAPCT501	Human Physiology and Medical Terminology	<ul style="list-style-type: none"> <li>Concept of Tridosha in Ayurveda: Overview of Vata, Pitta, and Kapha doshas and their role in regulating major physiological functions across body systems.</li> </ul>	-	5 %
2	23UAPCT502	Clinical Biochemistry	<ul style="list-style-type: none"> <li>Traditional Systems of Medicine: Alternative medicine for diabetes - Herbal remedies &amp; Supplements</li> <li>Dialysis: Types - Hemodialysis and Peritoneal dialysis</li> </ul>	-	5 %
3	23UAPCT503	Molecular Biology	<ul style="list-style-type: none"> <li><i>Drosophila</i>: Introduction to fly model - Genetic Model Organism</li> <li>Phenotypes of wild type and mutant flies</li> <li>Chromosomal basis of inheritance - Experiments on eye color, wing shape, and other phenotypic traits</li> <li>Guidelines for using <i>Drosophila</i> in research - Discussion of alternatives and human practices</li> <li>Epigenetic influence of traditional Indian herbs: Indian Herbs with Epigenetic Influence</li> </ul>	-	10 %
4	23UAPCP503	Core Biochemistry Practicals - V	<ul style="list-style-type: none"> <li>WIDAL test</li> <li>VDRL test</li> <li>CRP test</li> <li>Single Immunodiffusion (CP VI to CP V)</li> </ul>	-	20 %
5	23UAPET505	rDNA Technology	<ul style="list-style-type: none"> <li>Plant grafting techniques in ayurveda: Sandhana, Ankurārpaṇa, Agnisamyoga and Pratibandhana</li> </ul>	-	3 %
6	23UAPET507	Bioprocess Technology	<ul style="list-style-type: none"> <li>Difference between traditional Fermentation Techniques and Modern Bioprocess Application</li> <li>Biotransformation of Phytochemicals as Herbal Products</li> </ul>	-	5 %

7	23UAPST508	Fundamentals of Immunology	<ul style="list-style-type: none"> <li>Primary and secondary immune response</li> <li>Hybridoma techniques of Monoclonal Antibody production and applications</li> <li>Traditional Indian Vaccination Practices: An Overview</li> </ul>	<ul style="list-style-type: none"> <li>Immunity to infectious diseases: Immunity to Bacterial and Viral diseases</li> <li>Attributes of cytokines</li> <li>Resistance to tumors: Tumor antigens, Tumor immunotherapy, Lymphoid tumors - Burkitt's Lymphoma.</li> </ul>	10 %
8	23UAPAL509	Advanced Learners Course III - Cancer Biology	<ul style="list-style-type: none"> <li>Cytotoxic Effects of Herbs: <i>Withania somnifera</i> and <i>Curcuma longa</i></li> </ul>	-	2 %
9	23UAPAL510	Advanced Learners Course IV - Entrepreneurship Development in Life Sciences	<ul style="list-style-type: none"> <li>Healing Herbs for Terrace Cultivation: Holy Basil, Sage, Methi &amp; Thyme</li> </ul>	-	2 %
10	23UAPCT601	Medicinal Biochemistry	<ul style="list-style-type: none"> <li>Folk and classical streams of medical knowledge in India: Folk &amp; Tribal Medical Practices, Home remedies, Bone setting, poison healers.</li> </ul>	-	5 %
11	23UAPCP602	Core Biochemistry Practicals - VI	<ul style="list-style-type: none"> <li>Identifying life cycle stages of Drosophila</li> <li>Larval mobility &amp; olfactory assay</li> <li>Phototaxis analysis</li> <li>Genomic DNA isolation &amp; PCR</li> <li>pH profile of the gastrointestinal tract in Drosophila</li> <li>Antimicrobial Sensitivity testing by Disc diffusion method</li> </ul>	<ul style="list-style-type: none"> <li>WIDAL test</li> <li>VDRL test</li> <li>CRP test</li> <li>Single Immunodiffusion</li> <li>(CP VI to CP V)</li> <li>Estimation of Ascorbic acid from Citrus Fruits by Dye Method</li> </ul>	22 %
12	23UAPET604	Plant Biochemistry and Plant Therapeutics	<ul style="list-style-type: none"> <li>Agriculture in ancient India: Traditional methods for Pest control and manure in plants.</li> </ul>	<ul style="list-style-type: none"> <li>Specific roles of essential elements and their deficiency symptoms in plants</li> </ul>	5 %
13	23UAPET605	Environmental Biochemistry	<ul style="list-style-type: none"> <li>Ayurvedic Environmental Practices with Biochemical Relevance: Agnihotra, Use of Medicinal Plants in Detoxification, Panchagavya and Ayurvedic Shodhana</li> </ul>	-	5 %
14	23UAPET606	Hormonal Biochemistry	<ul style="list-style-type: none"> <li>Ayurvedic Herbs: Influence of Ayurvedic formulations to endocrine systems and Hormonal Disorders</li> </ul>	-	5 %

15	23UAPET609	Biostatistics	<ul style="list-style-type: none"> <li>• Ayurveda in Biostatistics: Classification of Prakriti Analysis, Herbal Drug Standardization.</li> </ul>	-	2 %
16	23UAPST610	Bioinformatics	<ul style="list-style-type: none"> <li>• Common Docking programs: AUTODOCK, GOLD</li> <li>• Bioinformatics Tools and Databases in Ayurveda: Ayurgenomics Database, AYUSH Research Portal and Public omics databases (NCBI, EMBL) used for Ayurvedic research</li> </ul>	<ul style="list-style-type: none"> <li>• Economics prospects</li> <li>• From lead to commercialization</li> </ul>	10 %

In overall, there had been 6.1 % of revision in the Syllabus of B.Sc Biochemistry Programme

All the above resolutions are approved

1. Dr. A. K. VIDYA

*dd & 15/4/25*

2. Mr. R. RASU

*N. Rasu 15/4/25*

3. Dr. N. SANGEETHA

*N. Sangeetha 15/04/25*

4. Dr. T. PALVANNAN

*Palvannan 15/4/25*

5. Dr. B. RAMESH

*B. Ramesh 15/4/25*

6. Dr. K. CHANDRAKUMAR

*Dr. Chandrakumar 15/4/25*

7. Dr. M. SARAVANAKUMAR (ONLINE)

*M. Saravanan 15/04/25*

8. Dr. JAYAPRAKASH NATARAJAN

*Jayaprakash Natarajan 15/04/25*

9. Mr. S. NATARAJAN

*S. Natarajan 15/4/25*

10. Dr. G. KARTHIKEYAN

*G. Karthikeyan 15/4/25*

11. Mr. T. G. NAGULAN

*T. G. Nagulan 15/4/25*

12. Dr. P. KOUSALYA

*P. Kousalya 15/4/25*