



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 06.04.2024

KONGU
Assuring the Best



KONGU ARTS AND SCIENCE COLLEGE
(An Autonomous Institution, Affiliated to Bharathiar University, Coimbatore)
Nanjanapuram, Erode – 638 107



DEPARTMENT OF BIOCHEMISTRY

BOARD OF STUDIES MEETING

AGENDA

DATE: 06.04.2024

1. To consider and approve the Scheme of Examination and Syllabi for the students admitted during the academic year 2022-2023 and 2023-2024 and onwards.
2. To consider and 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 2023-2024 and onwards.
3. To consider and approve the continuation of the self study courses Gender Studies in III Semester and Fundamentals of Yoga in IV Semester for the UG students admitted during the academic year 2023-2024 and onwards.
4. 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.
5. To consider and approve the panel of examiners.
6. To consider and discuss any other business/subjects with the permission of the chair.



KONGU ARTS AND SCIENCE COLLEGE
(An Autonomous Institution, Affiliated to Bharathiar University, Coimbatore)
Nanjanapuram, Erode – 638 107



The meeting of the Board of Studies in BIOCHEMISTRY UG and PG was conducted on 06.04.2024 at 10.30 a.m. in our Department.

The following members were present:

Chairman : Dr. A. K. Vidya

Members :

1. Ms. T. Radha (Senior Faculty)
2. Dr. N. Sangeetha (Senior Faculty)
3. Dr. K. Chandrakumar (Subject Expert)
4. Dr. B. Ramesh (Subject Expert)
5. Dr. T. Palvannan (University Nominee)
6. Dr. M. Saravanakumar (Industrial Expert)
7. Dr. Jayaprakash Natarajan (Alumni Representative)
8. Mr. R. Rasu (Faculty Member)
9. Mr. S. Natarajan (Faculty Member)
10. Dr. G. Karthikeyan (Faculty Member)
11. Mr. T. G. Nagulan (Faculty Member)

Subject related to CBCS, Outcome Based Education, withdrawal of NaanMudhalvan Courses, Flexibility in implementing TANSCHÉ syllabus, Panel of Examiners were discussed and the following are the resolutions:

1. It is resolved to approve the Scheme of Examination and Syllabi of **III and IV Semesters** for the **B.Sc and M.Sc Biochemistry** students admitted during the academic year **2023 – 2024** and onwards.
2. 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 **2022 – 2023** and onwards.
3. It is resolved to approve there is **no change** in the Scheme of Examination and Syllabi of **I and II Semesters** for the **B.Sc and M.Sc Biochemistry** students admitted during the academic year **2024 – 2025** and onwards.
4. 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 2023-2024 and onwards.
5. It is resolved to approve the continuation of the self study courses Gender Studies in III Semester and Fundamentals of Yoga in IV Semester for the UG students admitted during the academic year 2023-2024 and onwards.
6. 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.
7. 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.
8. The resolution for withdrawing the NaanMudhalvan Courses has been ratified and implemented, as discussed and approved in the BOS meeting held on 16.12.2023 (Phase I) for students admitted during the academic year 2023 – 2024 and onwards.
9. The resolution has been implemented, allowing flexibility in implementing the TANSCHÉ syllabus as discussed and approved in the BOS meeting (Phase I) held on 16.12.2023 for the students admitted to UG/PG programs in Autonomous Colleges.
10. It is resolved to approve the Panel of Examiners for Question Paper Setting and Central Valuation.

B.Sc Biochemistry

The following modifications are done in the Syllabi of III and IV Semesters for the B.Sc Biochemistry students admitted during the academic year 2023-2024 and onwards based on the feedback obtained from Stakeholders and recommendations of the BOS Panel members.

- **Biomathematics** (New course) was introduced instead of allied III Basic Mathematics in Semester III
- **Phytochemistry and Pharmacognosy** (new course) is offered as Advanced Learners Course II instead of Phytochemistry and Phytochemical techniques in Semester IV
- The new experiments were incorporated in the **Core Biochemistry Practicals IV** offered in the Semester IV.
- There is a major revision made in the content of Non-Major Elective I – **Public Health and Hygiene** and Non-Major Elective II – **Nutrition and Diet Therapy**

The following modifications are done in the Syllabi of V and VI Semesters for the B.Sc Biochemistry students admitted during the academic year 2022-2023 Batch only based on the feedback obtained from Stakeholders and recommendations of the BOS Panel members.

- The Nutraceuticals portion was incorporated in the **SBC: Nutritional Biochemistry** Syllabus offered in the Semester V
- **Entrepreneurship Development in Life Sciences** was introduced (new course) instead of Advanced learners course IV- Entrepreneurship Development in Life Sciences and Healthcare

M.Sc Biochemistry

The following modifications are done in the Syllabi of III and IV Semesters for the M.Sc Biochemistry students admitted during the academic year 2023-2024 and onwards based on the feedback obtained from Stakeholders and recommendations of the BOS Panel members.

- The Unit 1 and 2 in the Core paper: **Advanced Clinical Biochemistry** was merged and instead of unit 2 was replaced by incorporating topics on various metabolic disorders.
- The SPSS packages topic was included in the Core paper: **Research Methodology and Biostatistics**

Modification by addition and removal of topics are carried out in the syllabi of B.Sc and M.Sc Biochemistry (Refer Annexure b)

II B.Sc Biochemistry

S. No	Course Code	Course Name	Topics Introduced	Topics removed	% of revision
1	23UAPCT301	Core 5: Enzyme and Enzyme Technology	Nil	Nil	Nil
2	23UAPCP302	Core: Biochemistry Practicals - III	Biochemical tests used in identifying and differentiating bacteria: IMViC Test	Nil	5 %
3	23UAPAT303	Allied 3: Bio Mathematics	All 5 Units changed	Nil	100 %
4	23UAPST304	Skill Based Course I: Microbiology	Retro Virus	Unit 2 - Autoclave, Phase Contrast Microscope Unit 3 - Maintenance of Pure Culture. Unit 4 -SARBECO Family Unit 5 - Microbial Diseases in Humans: Normal human micro flora; Host - Parasitic interaction; Epidemics, Intoxications - Types. Direct contact Disease: Rabies.	10 %
5	23UAKNT307	Non Major Elective – I: Public Health and Hygiene	Nil	Unit 1 - oral hygiene, sleeps hygiene, hand washing, toiletry and clothing. Food and cooking hygiene, medical hygiene. Unit 2 - Functions of Food and cholesterol Energy: Definition of Kilocalories, Joule, Energy value of foods, SDA of Foods. Basal Metabolic Rate, Fast food, Soft drinks, Ice creams and Broiler chicken. Unit 3 - Jaundice, Cholera, Diarrhea and Typhoid, causative agents, Sexually transmitted infections: AIDS- causative agents, symptoms and prevention. Unit 4 - Two wheelers, Definition by WHO and necessities of mental well being and illnesses and Importance of Yoga Unit 5 - Emphasis should be given to pan masala, amphetamines, hashish, opium, brown sugar, pethedine	40 %

6	23UAPCT401	Core 6: Intermediary Metabolism	Nil	Nil	Nil
7	23UAPCF402	Core: Biochemistry Practicals - IV	Colorimetric Experiments • Estimation of Glucose by Phenol sulphuric acid method • Estimation of Cholesterol by Zak's method. • Estimation of Amino acid by ninhydrin method • Estimation of Keto acid by DNPH method • Estimation of Protein by Biuret method • Estimation of Phosphorous by Fiske and Subbarow's method. Titration Experiments • Estimation of reducing sugars by Hedgedon and Jensen method • Estimation of Ascorbic acid by dye method • Estimation of Lactose by benedicts method • Estimation of Chloride – Vanslyke's method • Estimation of Glycine by formalin method	Nil	100 %
8	23UAPAT403	Allied 4: Python Programming	Nil	Nil	Nil
9	23UAPAP404	Allied Practicals 2: Python Programming Lab	Nil	Nil	Nil
10	23UAPST405	Skill Based Course 2: Forensic Biochemistry	Nil	Nil	Nil
11	23UAKNT406	Non Major Elective – II: Nutritional Diet Therapy	Nil	Unit 1 - Introduction, purpose and principles, Modification of normal diet: Etiology, clinical features Unit 2 - Metabolism in fever and Tuberculosis. Diet in surgical conditions, Burns Unit 3 - Role of alcohol in liver diseases. Unit 4 – Treatment of Renal diseases Hypertension and Coronary Heart Disease Unit 5 - Impact of nutritional deficiency on the outcome of Pregnancy, Food habits of Older People. Planning Meals for Older people.	20 %

12	23UAPAL407	Nanotechnology and Clinical Trials	Nil	Nil	Nil	Nil
13	23UAPAL408	Phytochemistry and Pharmacognosy	All 5 units changed	Nil	Nil	100 %

III B.Sc Biochemistry

S.No	Course Code	Course Name	Topics added	Topics removed	% of revision
1	22UAPCT501	Core VIII - Human Physiology and Medical Terminology	Nil	Unit I - ECF and ICF	1 %
2	22UAPCT502	Core IX - Clinical Biochemistry	Nil	Unit 1-Urine test and Diabetic Hypoglycemia Unit 2 - Xanthomatosis Unit 3 - Reye's Syndrome Unit 4 - Intestinal function Test - Xylose excretion Unit 5 - Renal blood flow	20 %
3	22UAPCT503	Core X - Molecular Biology	Unit 1 - Conservative and Dispersive mechanisms DNA Damage: Definition and Causes	Unit 1 - Experimental proof for semiconservative mechanism, Difference between Prokaryotic and Eukaryotic Replication, Direct DNA Repair Unit 5 - Transposons Types - Cut-and-Paste Transposons, Replicative Transposons, Retro Elements	20 %
4	22UAPCP504	Core Biochemistry Practicals III	Nil	Unit 2 - Urobilinogen	5 %
5	22UAPET505	rDNA Technology	CRISPR-CAS9 Gene Editing Tool: principles and applications	Nil	5 %
6	22UAPET506	Plant and Animal Biotechnology	Nil	Nil	Nil
7	22UAPET507	Microbial Genetics	Nil	Nil	Nil
8	22UAPST508	Skill Based III - Nutritional Biochemistry	Nutraceuticals: Definition, Scope, Classification based on source and chemical nature and nutraceuticals market	Unit 3 - Diet for Cancer, Covid disease Unit 4 - Disorder related to Starvation. Unit 5 - pathogenic Microorganisms, Contamination of foods with toxic chemicals and pesticides	20 %

9	22UAPAL509	Advanced learners course III- Cancer biology	Phases of Cell cycle	Unit 2 – Cell birth, Linage and cell death Cellular morphology, Cell culture based Vaccines Unit 3 – Other tumour suppressor proteins Types and their impact on apoptosis	10 %
10	22UAPAL510	Advanced learners course IV- Entrepreneurship Development in Life Sciences	All 5 units revised	Nil	100 %
9	22UAPCT601	Core XI - Medicinal Biochemistry	Nil	Nil	Nil
10	22UAPCT602	Core XII - Plant Biochemistry and Plant Therapeutics	Nil	Nil	Nil
11	22UAPCT603	Core XIII – Fundamentals of Immunology	Unit 2 - Antigenic Determinants - isotypes, allotypes and idiotypes. Properties, attributes of cytokines Unit 3 - Mancini test	Unit 3 - Complement fixation test.	10 %
12	22UAPCP604	Core Biochemistry Practicals IV	Nil	Unit 1 - Estimation of Aspirin content in drugs	3 %
13	22UAPEP605	Bioinformatics Practicals	Nil	Spdbv	
14	22UAPET606	Environmental Biochemistry	Nil	Nil	Nil
15	22UAPET607	Hormonal Biochemistry	Nil	Nil	Nil
16	22UAPET608	Diagnostic Biochemistry	Nil	Nil	Nil
17	22UAPET609	Biostatistics	Nil	Nil	Nil
18	22UAPEV610	Project	Nil	Nil	Nil
19	22UAPST611	Skill Based IV - Bioinformatics	Nil	Nil	Nil

In overall, there had been a **31 %** of revision in the Syllabus of B.Sc Biochemistry Programme

B.Sc. Biochemistry

S. No	Course Code	Course Name	Topics added	Topics removed	% of revision
1	23PBFCT301	Core10 - Advanced Clinical Biochemistry	Carbohydrate metabolism: Diabetes Mellitus – Types, Diabetic ketoacidosis Lipid metabolism: Atherosclerosis Protein metabolism: Cystinuria, Phenylketonuria, Maple syrup urine disease	Unit 1 - Chemical examination and Analysis of CSF, Blood collection with syringe Unit 4 - Lysosomal Storage disorders Test based on primary function - measuring circulating T3, T4, TSH level and in vitro resin-uptake of T3 test, Jaundice	25 %
2	23PBFCT302	Core 11 – Metabolism and Metabolic Regulation	Biosynthesis and regulation of Amino acids	-	1 %
3	23PBFCT303	Core 12 - Genetic Engineering	Nil	Unit 1 - pUC, Retrovirus vectors Unit 3 - PCR based applications: RAPD, RACE Unit 4 - Cloning in Yeast: Yeast Expression Vectors. Expression of cloned genes in <i>S.cerevisiae</i> . Hybrid arrest translation (HART) and Hybrid release translation (HRT)	20 %
4	23PBFCT304	Core 13 – Pharmaceutical Biochemistry	Nil	Nil	Nil
5	23PBFCT305	Core 14-Research Methodology and Biostatistics	SPSS Packages	Nil	Nil
6	23PBFCT306	Core Biochemistry Practicals III	Nil	Glucose 6 Phosphatase Fructose 1,6 bisphosphatase	10 %
7	23PBFCT307	Elective – Microbial Biochemistry	Production of Bioplastics	Nil	1 %
8	23PBFCT308	Elective – Nutritional Biochemistry	Nil	Nil	Nil
9	23PBFCT309	Elective – Molecular Basis of Infectious & Non-infectious Diseases	Nil	Nil	Nil
10	23PBFCT402	Elective Practicals – Cell Culture and Molecular Techniques	Nil	Nil	Nil

11	23PBFE403	Elective – Molecular Diagnostics	Nil	Nil	Nil
12	23PBFEV404	Elective Project Work	Nil	Nil	Nil
13	23PBFSW405 / 23PBFSE406	SWAYAM (or) Methods in Molecular Biology	Nil	Nil	Nil

In overall, there had been a **5 %** of revision in the Syllabus of M.Sc Biochemistry Programme

All the above resolutions are approved

1. ~~old~~ 6/4/24
2. ~~ok. chesse~~ ✓
6/4/24
3. Brent 6/4/24
4. ~~M. J. [unclear]~~ 06/04/24
5. Dr. T. Palvannan (Attended the Meeting
By ONLINE)
6. Nthapannul
6/4/24
7. Radhys
6/4/24
8. N. Luy 6/4/2024
9. n. n. 6/4/24
10. S. watarajan
6/4/24
11. ~~S. L. L. [unclear]~~ 6/4/24
12. ~~[unclear]~~ 6/4/24