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DEPARTMENT OF BIOCHEMISTRY & BIOINFORMATICS
Karpagam Academy of Higher Education
(Established Under Section 3 of UGC Act 1956)
Eachanari PO, Coimbatore – 641 021, India.

BOARD OF STUDIES (UG & PG – BIOCHEMISTRY)

13.04.2015

Minutes of the meeting of the Board of Studies in **Biochemistry** held on **13.04.2015, 09.30 am** at **Department of Biochemistry department (UG Lab)**, Karpagam Academy of Higher Education.

Members Present:

1. Dr. V.K. Gopalakrishnan
2. Dr. K. Devaki
3. Dr. K. Poornima
4. Dr. P. R. Padma (External experts)
5. Dr. M. A. Rathi (External experts-Alumni)

The Chairperson welcomed the members of the Board. The Board carefully scrutinized the draft syllabus / syllabi and after detailed discussion, the following resolutions were passed.

Agenda: 1:

To consider and approve the Regulations and Syllabus for **UG and PG Biochemistry, Allied Biochemistry** programmes.

Resolution: 1

Resolved to approve the Regulations and Syllabus for **UG and PG Biochemistry, Allied Biochemistry** programme and it comes into effect from 2015-16 (Approved changes in the syllabus is given in Annexure-I).

Agenda: 2

To consider and approve the Syllabus for Research Programmes in **Part I Biochemistry (M. Phil and Ph. D)**.

Resolution: 2

1. Resolved to approve Part I Syllabus for Research Programmes in **Biochemistry (M. Phil and Ph. D)** and it comes into effect from 2015-16 (Approved changes in the syllabus is given in Annexure-II

Change in the syllabi (%)		
UG	PG	M.Phil/Ph.D
88%	57%	25%
The total number of course in the UG programme Biochemistry consists 52 courses (excluding languages). Total percentage of changes done = $2900/33 = 88\%$		
The total number of course in the PG programme Biochemistry contains 28 courses. Total percentage of changes done = $1379/24 = 57\%$.		
M.phil /Ph.D Biochemistry: Two new courses (1) Plant Molecular Biology and (2) Animal Cell Culture have been added in 2015-2016. Total number of courses present during the year 2014-15 = 6; Total number of courses present during the year 2015-16 = 8; Percentage change in the 2015-2016 syllabi = 25% .		

ANNEXURE-I

The following changes are made in the existing syllabus for 2015-16 batch (UG and PG)

M.Sc., Biochemistry

- ▮ The new course Chemistry of Biopolymers (15BCP101) is introduced.
- ▮ Enzymes and Microbial technology (15BCP102): in Unit I has been modified with the topics coenzymes and cofactors. In Unit III the topic Enzymes - Nomenclature and classification of Enzymes, Isolation, purification and characterization of enzymes has been removed; In Unit V bio fertilizers is included.
- ▮ In Bioinstrumentation (15BCP103) some topics MALDI-TOF, ICPMS in Unit I are shifted to Unit III; In Unit IV the topic 2D gel electrophoresis is included.
- ▮ In practical- I (15BCP111) an experiment - Salting out of proteins by ammonium sulphate precipitation has been added.
- ▮ In practical II Plant Biochemistry and Microbiology (15BCP112), the topic estimation of total alkaloid is removed.
- ▮ In Regulation of metabolic pathways (15BCP201), in unit IV, the topic Regulation of biosynthesis of chlorophyll and haemoglobin is replaced with Biosynthesis of heme (porphyrin) and its regulation; In Unit V the topic integration of metabolism has been included.
- ▮ New course Good laboratory Management (15BCP204B), Fermentation Technology (15BCP204C), Plant Tissue Culture (15BCP204D), Chemistry of Natural Products (15BCP303), Drug Designing (15BCP401), Genomics and Proteomics (15BCP305E), Dietetic Management of Disease (15BCP204E) has been introduced.
- ▮ The courses Environmental Biochemistry (14BCP204C), Applied Biochemistry (14BCP204B), Emerging Trends in Biochemistry (14BCP305) has been removed.
- ▮ In Semester III in Unit II, interchange of topics has been carried out; In Unit V some commercially available docking software are included.
- ▮ In Drug Biochemistry (14BCP303), all the Units are revised and title of the course changed to Drug Biochemistry and Neurochemistry (15BCP304) according to the stakeholders feedback. Introduced Neurochemistry in the syllabus, genetically engineered protein and peptide are also included.

B.Sc., Biochemistry

The entire curriculum was adopted as per UGC guidelines, which is being implemented by University of Delhi for UG Biochemistry. Few minor modifications were made as per the advice from different stakeholders.

The following changes are made in the existing syllabus

- ⌈ In Semester III, allied elective I in Food Preservation Technology (15BCU303C) in Unit II the topic preservation with high salt and sugar is added.
- ⌈ In Semester III allied Practical III Nutritional Biochemistry (15BCU312B) some of the spectrophotometric practicals have been replaced with some relevant experiments.
- ⌈ In Semester IV practical IV in Cell Biology and Human Physiology (15BCU411), in human physiology 1, 2, 3 practical's has been shifted to Semester IV, Practical IV Clinical Biochemistry (15BCU611).
- ⌈ In Semester V core elective I Human Genetics (15BCU505A) in Unit II the topic single gene and diseases is removed.
- ⌈ In Semester V core elective I Fundamentals of Nanotechnology (15BCU505B) Unit II is replaced with some topics like types of nanoparticles and characteristics of nanoparticles. In Unit V the topic 'Nanobots' included
- ⌈ In Semester V core elective I Cancer Biology (15BCU505C) in Unit II the topic retinoblastoma is included; In Unit IV the topic apoptosis is modified as cell death and interchange of topics were carried out within the Unit
- ⌈ In Semester VI core elective II, Bio ethics and Bio safety (15BCU603B) in Unit II interchange of topics has made, in Unit II the topic human ethical committee and its guidelines has been included. In Unit III the topics acclimatization, rehabilitation and sacrifice procedure has been included; In Unit V the topic, the types of Intellectual Property Rights is included and the last topic is removed.
- ⌈ In Semester VI Core elective II, Stem cell Biology (15BCU603C) in Unit II, Stem cell niche is included. In Unit IV some topics has been removed and the topic cell cycle relationship with stem cells is included.
- ⌈ In Semester VI additional paper Good Laboratory practices (15BCU506) in Unit I is replaced with Safety measure of lab.

Allied Biochemistry: B.Sc., Microbiology

- ⌈ No changes are required

Allied Bioinformatics: B.Sc., Physics

- ⌈ In Bioinformatics II, in Unit I the full content is replaced with biological data bases: Important biological databases, Sequence data bases – nucleic acid databases – Genebank, DDBJ, EMBL, Unigene, protein sequences databases, Swiss prot, PIR.
- ⌈ In Unit II Keyword search and advance search topics were included.
- ⌈ No changes in Practical I and Bioinformatics I syllabus.

ANNEXURE – II

Approved changes in the syllabus of M.Phil and Ph.D Biochemistry

Two new courses are included as special papers.

1. Plant Molecular Biology (15RBC301E)
2. Animal Cell Culture (15RBC301F)



Chairperson

(VK GOPALAKRISHNAN)

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REGISTRAR

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