KARPAGAM ACADEMY OF HIGHER EDUCATION

(Deemed to be University, established under section 3 of UGC Act 1956)

DEPARTMENT OF BIOCHEMISTRY

BOARD OF STUDIES (UG & PG – BIOCHEMISTRY) – 2016-2017

Minutes of the meeting of the Board of Studies in **Biochemistry** held on **30.03.2016, 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. M. Sridhar Muthusami
5. Dr. Sulaiman C.T. (External expert)
6. Dr. P. Ragavendran (Alumni)
7. Dr. T.M. Simy (Student representative PG)
8. Ms. N. Pooja (Student representative UG)

Chairperson welcomed the members of the Board. The Board carefully scrutinized the drafted syllabus/syllabi of the following course:

- B.Sc., Biochemistry (2016 Batch)
- M.Sc., Biochemistry (2016 Batch)

Agenda: 1

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

Resolution: 1

Resolved to approve the Regulations and Syllabus for **UG and PG Biochemistry,** programme and it comes into effect from 2016 (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

Resolved to approve Part I Syllabus for Research Programmes in **Biochemistry (M. Phil and**

Ph. D) and it comes into effect from 2016 without any changes.

Change in the syllabi (%)		
UG	**PG**	**M.Phil/Ph.D**
100%	17%	0%
New syllabi as per the UGC have been adopted. Hence, all the courses and syllabus are considered as new. Total percentage of changes done = **100%**		
The total number of course in the **PG programme Biochemistry** contains 29 courses. Total percentage of changes done = 501/29 = 17**%**.		
M.Phil /Ph.D Biochemistry: No changes made in the syllabi **0%.**		

ANNEXUR
E-I

The following corrections were carried out in the syllabus (UG and

PG) M.Sc., Biochemistry

- In Chemistry of Biopolymers (16BCP101) Unit- I: dietary fiber and in Unit-II: protein

  function as defense, transport and enzymatic is included.

- In Enzymes and Microbial Technology (16BCP102) in Unit-II, Enzyme based diagnostic techniques is included.

- The course Bioinstrumentation (16BCP103) is renamed as Bioinstrumentation and Good Laboratory Practice. Unit I: FTIR, NIR and Raman Spectroscopy are included. Units I and II are merged. In Unit II the topics: ICPMS, LCMS are included. Since good laboratory management is essential for biochemistry students. In Unit IV Western blot: principles and applications are included. Unit V: New Unit: Good laboratory practices.

- The course Good laboratory management (15BCP204B) and Fermentation

  Technology (15BCP204C) has been removed

- In Plant Biochemistry (16BCP105A), in Unit-V, synthesis of secondary metabolites

  Sikkimatic pathway & Glyco steroids are included.
- In Plant Tissue Culture (16BCP105B) , in Unit-I, allelopathic effect is included
- In Practical – II Plant Biochemistry and Microbiology (16BCP112) TLC-Bioautography for antioxidant /antimicrobial activity is included, and a new reference book (plant drug analysis by wagner) is included.
- In Regulation of Metabolic Pathway (16BCP201) in Unit II diabetes insipidus topic is included.
- The course Clinical Biochemistry and Endocrinology (15BCP302) is changed to Clinical Biochemistry (16BCP302). Unit IV and Unit V new contents included, (Oncology and Pathophysiology).
- New course Endocrinology (16BCP203) has been introduced (New syllabus).
- In Genomics and Proteomics (16BCP205C) in Unit-IV Proteomics in drug discovery is included.
- In Immunology (16BCP301), in Unit-V the technique CMIA (chemi microparticle immunosorbant assay) is included.
- In Chemistry of Natural Products (16BCP303) in Unit II and Unit III merged as Unit Unit III. New Unit I included new topics such as preliminary phytochemical analysis with standardization of herbal drugs, physiochemical analysis of drug.
- In Drug Biochemistry and Neurochemistry (16BCP304) in Unit-I Bioavailability of drug is included.
- In Biostatistics and Research Methodology (16BCP305A) in Unit-III, the topic F test is included.

B.Sc., Biochemistry

The syllabus recommended by UGC was followed from this academic year 2016-17 with minor modifications detailed below (All the courses are new)

- In Proteins (16BCU201) in Unit II, normal and reverse phase HPLC included.
- In Enzymes practicals V (16BCU212) coupled assay of Glucose-6-phosphate dehydrogenase is replaced with simple assay.
- In Tools and Techniques in Biochemistry practical (16BCU314A) instead of measurement of fluorescent spectrum, UV spectrum of compound is included.
- In Protein Purification Techniques (16BCU404B), in Unit III dialysis is included.
- In Gene Expression and Regulation practical (16BCU412), instead of practical – diauxic growth curve effect of inhibitors on protein synthesis and accumulation of protein due to proteosome inhibitor are replaced with Cdna synthesis, assessment of gene expression using RT-PCR and Lac operon were included.

- In Protein Purification Techniques-practical (16BCU414B) affinity chromatography is replaced with paper chromatography
- In Nutritional Biochemistry-practical (16BCU512B), Vitamin A/E estimation in serum is replaced with Vitamin A/E estimation in food items.
- In Plant Biochemistry practical (16BCU513A), separation of photosynthetic pigments by TLC is replaced with separation of plant pigments by TLC.
- In Molecular Basis of Infectious Diseases practical (16BCU514B), PCR based diagnosis may be treated as demo experiment.
- In Drug Biochemistry (16BCU603A) in Unit I, the topics Bioavailability and pharmacokinetics may be added.
- In Genetic Engineering and Biotechnology practical (16BCU611-A), hyper expression of poly histidine tag, recombinant protein purification is removed.
- Environmental Studies (2016-Batch) for Arts & Science UG students- In Unit - II effect of fireworks have been incorporated as per UGC.

Chairperson

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