



DEPARTMENT OF BIOCHEMISTRY & MOLECULAR BIOLOGY
SCHOOL OF BIOLOGICAL SCIENCES
CENTRAL UNIVERSITY OF KERALA
(Established under the Central Universities Act, 2009)
Website: www.cukerala.ac.in

CUK/SBS/BCMB/BOS/Minutes/Dec-2018

18-12-2018

Minutes of the meeting of Board of Studies in Biochemistry & Molecular Biology held on 18-12-2018 at 10.30 AM in Department of Biochemistry and Molecular Biology, Central University of Kerala, Periyar, Kasaragod.

Agenda:

1. Reporting the renaming of the M.Sc. program
2. Revision of syllabus
3. Updating the panel of question paper setters and evaluators
4. Framing model question paper
5. Any other item

Members attended the meeting:

- | | | |
|--------------------------------------|----|-----------------|
| 1. Prof. (Dr). Govinda Rao Duddukuri | -- | Chairperson |
| 2. Prof. (Dr). Annie Abraham | -- | External member |
| 3. Prof. (Dr). T. Rajamohn | -- | External member |
| 4. Prof. (Dr). Sathisha G J | -- | External Member |
| 5. Dr. K. Arunkumar | -- | Member |
| 6. Dr. Rajendra Pilankatta | -- | Member |
| 7. Dr. R. Aswati Nair | -- | Member |



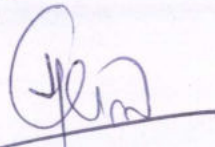


Resolutions:

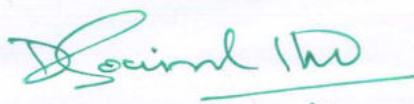
1. The chairperson has welcomed the BOS committee members and thanked the members for their consent and endorsement for renaming the M.Sc. Biochemistry and Molecular Biology program as M.Sc. Biochemistry program and informed the members that the same was approved by Academic council held on 12-12-2018. And this would come into effect for students admitted in 2018-19 batch.
2. The chairperson has explained the scheme of present syllabus of M.Sc. Biochemistry. The committee has discussed and suggested some constructive changes in the syllabus of two year M.Sc. Biochemistry program as per the Choice Based Credit System (CBCS) for further strengthening the curriculum and recommended its implementation from next academic year (Annexure- I).



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3. The committee has discussed elective papers and their syllabi and approved (Annexure-II)
4. The committee has resolved and approved the question paper model for the End semester examinations as per CUK guidelines. (Annexure-III)
5. The committee has resolved and approved the panel of examiners for question paper setting and evaluation for End-semester examinations as per guidelines of Central University of Kerala (Annexure-IV)

Member	Signature
1. Prof.(Dr). Annie Abraham Department of Biochemistry, University of Kerala, Kariyavattom, Thiruvananthapuram - 695 581	
2. Prof. (Dr). T. Rajamohan Department of Biochemistry, University of Kerala, Kariyavattom, Thiruvananthapuram - 695 581	
3. Prof. (Dr). Sathisha G J Department of Biochemistry, Kuvempu University Shankaraghatta Shimoga, Karnataka - 577 451	
4. Dr. K. Arun Kumar Associate professor, Dept. of Plant Science, Central University of Kerala, Kasaragod	
5. Dr. Rajendra Pilankatta Associate professor, Dept. of Biochemistry & Molecular Biology, Central University of Kerala, Kasaragod	





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6. Dr. R. Aswathi Nair
Associate professor,
Dept. of Biochemistry & Molecular Biology,
Central University of Kerala, Kasaragod



Dr. Govinda Rao Duddukuri,
Professor, Chairperson,
PG Board of Studies of Department
of Biochemistry and Molecular
Biology

BBM 5102 BIOANALYTICAL TECHNIQUES (3-1-0-3)

UNIT-I

Acids, Bases and Buffers, Isoelectric pH. Donnan membrane equilibrium, diffusion, osmosis, colloids, surface tension and viscosity. Spectrophotometry.

UNIT-II

Biochemical separation techniques: Principle and application of (a) Chromatographic techniques –affinity chromatography, ion exchange chromatography, gel filtration, TLC, GC, HPLC.

UNIT-III

(b) Electrophoretic methods, isoelectric focusing and blotting (c) Ultracentrifugation (d)GC MS, LC MS (e) Dialysis, ultrafiltration and lyophilisation.

UNIT-VI

Methods of determination and analysis of biomolecular structures, optical spectroscopy, NMR, mass spectrometry, X ray crystallography. ORD, CD, Fluorescence polarization, FRET.

UNIT-V

Techniques to study the plasma membrane properties. Karyotyping, FISH. Cell culture techniques, growth of cells in culture, primary culture, cell lines, applications. Sub cellular fractionation, ultra centrifugal analysis, flow cytometry.

Recommended books

1. Principles and Techniques of Biochemistry and Molecular Biology. Keith Wilson and John Walker, 2010.
2. Introduction to Instrumentation in Life Sciences. Prakash Singh Bisen and Anjana Sharma. 2012.
3. Crystallography Made Crystal Clear. Rhodes G. 2000.
4. U Satyanarayana, Biochemistry, Books And Allied (p) Limited, 2014
5. Tymoczko, John L., Jeremy M. Berg, and Lubert Stryer. Biochemistry: a short course. Macmillan, 2012.
6. Cox, Michael M. Lehninger principles of biochemistry. Freeman, 2013.
7. Bancroft, J.D. and Stevens, A.: theory and practice of histological techniques ed.3, Churchill livingstone inc. 1990. Edinburgh. London, Melbourne and New York.