



## Avinashilingam Institute for Home Science and Higher Education for Women

(Deemed to be University under Category A by MHRD, Estd. u/s 3 of UGC Act 1956)

Re-accredited with A+ Grade by NAAC. Recognised by UGC Under Section 12 B

Coimbatore - 641 043, Tamil Nadu, India

### Minutes of Board of Studies in Biochemistry, Biotechnology & Bioinformatics held on 04.07.2022 at 10.30 am

The following Members attended the meeting

#### Internal Members:

1. Dr. Anitha Subash, Professor & Head - Chairperson
2. Dr. S. Gayathri Devi, Professor - Member
3. Dr. T. Angayarkanni, Associate Professor - Member
4. Dr. Kalaiselvi Senthil, Associate Professor & Assistant Dean, Research - Member
5. Dr. N. Santhi, Assistant Professor (SS) - Member
6. Dr. D. Kavitha, Assistant Professor - Member

#### External Members:

1. Dr. N. Saraswathy, Professor, Department of Biotechnology, Kumarguru College of Technology, Coimbatore - Academician
2. Dr. Sujith Eranezhath, Assistant Director and Scientist, AVP Research Foundation, Coimbatore - Industrial Expert

#### Invited Members:

1. Dr. S. Sumathi, Associate Professor
2. Dr. R. Nirmaladevi, Assistant Professor (SG)
3. Dr. S. Velvizhi, Assistant Professor (SS)
4. Dr. A. Shobana, Assistant Professor (SS)
5. Dr. M. Rajeswari, Assistant Professor
6. Dr. S. T. Yamuna, Assistant Professor
7. Dr. E. Nithya, Assistant Professor
8. Dr. M. Sudha Devi, Assistant Professor
9. Dr. K. V. Shalini, Assistant Professor
10. Dr. C. C. S. Vasundhara, Assistant Professor
11. Dr. A. Pornnima, Assistant Professor

*S.A.*  
04/07/22

*N. hump*  
4/7/2022

## Agenda

1. (a) **CO-PO mapping** and matrices for 3<sup>rd</sup> and 4<sup>th</sup> semesters, applicable for **Postgraduate students** admitted from 2021-2022 & onwards have been included.

(b) **CO-PO mapping** and matrices for 3<sup>rd</sup> to 6<sup>th</sup> semesters, applicable for **Undergraduate students** admitted from 2021-2022 & onwards have been included.

B. Sc. Biochemistry & Biotechnology

M. Sc. Biochemistry

M. Sc. Biotechnology

M. Sc. Bioinformatics

2. (a) The following Specialization papers applicable for Ph.D. **Biochemistry** Part time scholars admitted in January, 2022 as given in Annexure 2 were approved.

**21PHBC03E – Efficacy of Aromatic Medicinal Plants and Spices and their Commercial Applications**

**21PHBC03F – Antibiofilm Potential of Secondary Metabolites**

(b) The following Specialization papers applicable for Ph.D. **Biotechnology** Full time scholars admitted in January, 2022 as given in Annexure 2 were approved.

**21PHBT03E - Techniques in Antibiofilm Research**

**21PHBT03F – Development of Biocolorants from Natural Resources**

(c) The following syllabi of Specialization paper applicable for Ph.D. **Biotechnology** Part time scholar admitted in January, 2022 as given in Annexure 2 was approved

**21PHBT03D – Molecular Techniques to study Tumour Metastasis and Recurrence**

*Handwritten signature and date:*  
4/1/2022

(d) **Revision of certain courses** applicable for students admitted from 2021-2022 & onwards.

(e) Minor revisions were carried out in the following UG and PG papers:

Programme	Course code	Course title	Semester	Credits	Percentage of revision
B.Sc. Biochemistry	21BBCC10	Drug Biochemistry	IV	3	10
B.Sc. Biochemistry	21BBCC11	Clinical Biochemistry	V	3	3
M. Sc. Biochemistry	21MBCC17	Genetic Engineering	III	4	5

(f) The course objectives for all courses have been modified. The references for the courses which are not updated have been updated.

(g) **The list of Subject experts for Board of Studies, Screening and Selection Committee, Question paper setting, for Practical Examinations and Valuation has been updated.** (Annexure 3)

(h) Implementation of **National Education Policy 2020** - Development of Curriculum Framework for specific Undergraduate programmes to provide access for Implementation of Academic Bank of Credits (ABC) and Credit Transfer has been recommended by the Board for 2023-2024 onwards.

(i) Introduction of Ph.D. in Bioinformatics with eligibility and syllabus has been approved.

(j) Due to an increase in demand for Biochemistry and Biotechnology programme, experts and other Members of the Board recommended to increase the number of seats in UG Biochemistry and Biotechnology programme or to start a self-finance programme in Biochemistry and Biotechnology.

1. Any other -Nil

- Adoption of dual programme
- Change of nomenclature (if any)

*Handwritten signature and date:*  
04/10/22  
N- [Signature]  
4/11/2022

1. Dr. Anitha Subash, Professor & Head
2. Dr. N. Saraswathy, Professor, Department of Biotechnology  
Kumaraguru College of Technology, Coimbatore
3. Dr. Sujith Eranezhath, Assistant Director and Scientist,  
AVP Research Foundation, Coimbatore
4. Dr. S. Gayathri Devi, Professor
5. Dr. T. Angayarkanni, Associate Professor
6. Dr. Kalaiselvi Senthil,  
Associate Professor & Assistant Dean, Research
7. Dr. N. Santhi, Assistant Professor (SS)
8. Dr. D. Kavitha, Assistant Professor
9. Dr. S. Sumathi, Associate Professor
10. Dr. R. Nirmaladevi, Assistant Professor (SG)
11. Dr. S. Velvizhi, Assistant Professor (SS)
12. Dr. A. Shobana, Assistant Professor (SS)
13. Dr. M. Rajeswari, Assistant Professor
14. Dr. S. T. Yamuna, Assistant Professor
15. Dr. E. Nithya, Assistant Professor
16. Dr. M. Sudha Devi, Assistant Professor
17. Dr. K. V. Shalini, Assistant Professor
18. Dr. C. C. S. Vasundhara, Assistant Professor
19. Dr. A. Poornima, Assistant Professor

N. Saraswathy 4/7/2022

Sujith Eranezhath 04/07/22

S. Gayathri Devi 4/7/22

T. Angayarkanni 4/7/2022

Kalaiselvi Senthil 4/7/2022

N. Santhi 04/07/22

D. Kavitha 4/7/22

S. Sumathi 4/7/22

R. Nirmaladevi 4/7/22

S. Velvizhi 4/7/22

A. Shobana 04/07/2022

M. Rajeswari 4/7/22

S. T. Yamuna 4/7/22

E. Nithya 4/7/22


M. Sudha Devi 04/07/2022

K. V. Shalini 4/7/22

C. C. S. Vasundhara 04/07/2022

A. Poornima 4/7/22

O.P. No. 2023/10



**Avinashilingam Institute for Home Science and Higher Education for Women**

(Deemed to be University Estd. u/s 3 of UGC Act 1956, Category B by Ministry)  
Re-accredited with A++ Grade by NAAC. Recognised by UGC under Section 12(B)  
Coimbatore - 641 043, Tamil Nadu, India

**Minutes of Board of Studies in Biochemistry, Biotechnology & Bioinformatics held  
on 26.04.2023 at 10.30 am**

**Members List**

**Internal Members**

- |   |               |
|---|---------------|
| 1. Dr.Anitha Subash, Professor & Head   | - Chairperson |
| 2. Dr. S. Gayathri Devi, Professor  | - Member      |
| 3. Dr.Kalaiselvi Senthil, Associate Professor &<br>Assistant Dean, Sponsored Research | - Member      |
| 4. Dr.S.Sumathi, Associate Professor  | - Member      |
| 5. Dr. N. Santhi, Assistant Professor (SS)  | - Member      |
| 6. Dr.R.Nirmaladevi, Assistant Professor (SG)   | - Member      |
| 7. Dr.S.Velvizhi, Assistant Professor (SS)  | - Member      |

**External Members**

- |   |                     |
|---|---------------------|
| 1. Dr.A.Hannah Rachel Vasanthi<br>Professor, Department of Biotechnology<br>Pondicherry University, Puducherry      | - Academician       |
| 2. Dr.Roshin Elizabeth George<br>Co-founder & Director, Biovent Innovations Pvt. Ltd,<br>Thiruvananthapuram, Kerala | - Industrial Expert |

**Invited Members**

1. Dr. T. Angayarkanni, Associate Professor
2. Dr.D.Kavitha, Assistant Professor
3. Dr. M. Rajeswari, Assistant Professor
4. Dr. S. T. Yamuna, Assistant Professor
5. Dr. E. Nithya, Assistant Professor
6. Dr. K. V. Shalini, Assistant Professor
7. Dr. C. C. S. Vasundhara, Assistant Professor
8. Dr. A. Poornima, Assistant Professor

*Dr. Anitha Subash*

*Roshin*

*26/4/2023*

## Agenda

1. a) **The Board has decided to implement the Learning Outcomes Based Curriculum Framework (LOCF)** for the aided Undergraduate Biochemistry & Biotechnology programme for students admitted from 2023-2024 & onwards. The entire syllabus for the programme was scrutinized by the External members and suggestions were given for improvisation.  
b) The syllabi for Undergraduate Biochemistry & Biotechnology programme were passed with the **inclusion of CO-PO mapping and matrix for the 1<sup>st</sup> to 4<sup>th</sup> semesters**, applicable for Undergraduate students admitted from the academic year 2023 - 2024 & onwards.
2. The syllabus for the newly started Undergraduate self-finance programme in Biochemistry & Biotechnology which will be started from 2023 onwards will be the same as that of the Undergraduate Biochemistry & Biotechnology aided programme.
3. Revision of the syllabi with change in the subject code for Postgraduate Biochemistry, Biotechnology and Bioinformatics programmes is applicable for students admitted from the academic year 2023 – 2024 & onwards.

### **M.Sc. Biochemistry**

- a. All the subject codes of the papers have been changed from 22MBC to 23MBC
- b. The title of the course, 23MBCC04 'Pharmaceutical and Hormonal Biochemistry' has been changed to 'Pharmaceutical and Endocrinal Biochemistry', the topic Cell Signaling and Regulation in Health and Diseases has been included in unit 3.
- c. In 23MBCC05 'Nutritional Biochemistry', Methods of dietary survey has been included for Self-study in unit 1 and Pesticide residues in food has been added in unit 5 as Self-study.
- d. In the course, 23MBCC09 'Genetics and Molecular Biology', all the units have been updated.
- e. In the course, 23MBCC10 'Diagnostic Biochemistry', molecular aspects have been added to all the units. The topics saliva as diagnostic tool, case studies of inborn errors of metabolism and markers of CHD are included in units 1, 2 and unit 4 respectively.
- f. In 21MBCC17 'Genetic Engineering', the term Bioethics has been included in unit 5.
- g. In 23MBCC18 'Advanced Enzymology', in the Self-study portion, Mass spectrometry in protein sequencing has been added in unit 1 and the term environmental concern is included in unit 5.
- h. In 23MBCC 19 'Neurochemistry' the title of unit 3 has been changed to 'Anatomy and Physiological Aspects of Brain' and the contents are revised. The topic secondary neurodegenerative disorders has been included in unit 5.
- i. In 23MBCC20 'Practicals V- Enzymology and Immunology', the topic radio immunoassay has been removed.

*A. K. K. K. K. K.*

*Chowdhury*

*26/4/2023*

- j. In the course 23MBC22 Environmental Biochemistry (self study), the term pandemics has been included in unit 5.
- k. In the course 23MBCI01 'Natural Antioxidants in Human Health and Diseases', the term enzymic and non enzymic antioxidants has been included in unit 5.

#### **M.Sc. Biotechnology**

- a. All the subject codes of the papers have been changed from 22MBT to 23MBT
- b. Content of the paper 23MBTC01 'Biochemical Concepts for Biotechnology' has been revised.
- c. In the course, 23MBTC02 'Cell Biology and Microbiology', minor changes have carried out in units 4 and 5.
- d. In the course, 23MBTC09 'Bioinformatics', the contents of units 2, 3 & 4 have been revised.
- e. In 23MTC16 'Plant Biotechnology', the units 1 and 2 have been combined and given as unit 1 Plant Genome and Physiology. The concepts of phytochemistry have been introduced as unit 2.
- f. In 23MBTC17 'Enzymes and Bioprocess Technology' the topics solid state fermentation and submerged fermentation has been added in unit 4.
- g. In 23MBTC18 'Pharmaceutical Biotechnology', the topics sub acute, sub chronic and OECD guidelines have been included in unit 3.
- h. In 23MBTC19 'Food Biotechnology and Nanobiotechnology', the content of unit 4 is revised and the topic pigment has been added in unit 5.
- i. In 23MBTC22 'Environmental Biotechnology' (Self-study), small changes have been made in units 1 and 5.
- j. In 21MBTI01 'Prospects of Biotechnology', the topic food packaging has been added in unit 3.
- k. In 23MBTM01 'Scientific and Technical Writing', minor changes were made in unit 1.

#### **M.Sc. Bioinformatics**

- a. All the subject codes of the papers have been changed from 22MBI to 23MBI
  - b. In 23MBIC17 'Molecular Modelling, Simulation and Drug Designing', the topic AI in Drug Design has been added in unit 5.
4. a) The scheme and syllabi for the courses 1 & 2 of Ph.D. Biochemistry, Ph.D. Biotechnology and Ph.D. Bioinformatics have been revised with changes in subject codes for students admitted from the academic year 2023-2024 and onwards.

#### **Ph.D Biochemistry**

- In the course, 23PHBC01 'Research Techniques for Biochemistry' the term Bioentrepreneurship has been included in unit 3.
- In the course, 23PHBC02 'Advanced Biochemistry', the term 'Biosafety and Bioethical Issues in Biomedical Research' has been included in unit 4.

*d. the end of the*

*Roshini*

*26/4/2023*

## Ph.D Biotechnology

- In the course, 23PHBT02 'Advanced Biotechnology. the terms 'Bioentrepreneurship' and 'Biosafety and Bioethical Issues in Biomedical Research' have been included in units 4 and 5 respectively.
- The following syllabi of Specialization courses applicable for Ph.D. scholars admitted during February, 2023 have been approved.

S. No	Reg. No.	Course code	Course title - Paper III (Specialization Paper)	Course
1	22PHBTF003	22PHBT03C	Biodegradation of xenobiotics and its application	Ph.D. Biotechnology
2	22PHBTF004	22PHBT03D	Role of environmental biomarkers in treatment and management of cancer	Ph.D. Biotechnology
3	22PHBTF005	22PHBT03E	Ethnopharmacological approach of carbon dots driven from medicinal plants	Ph.D. Biotechnology
4	22PHBTF006	22PHBT03F	Medicinal properties and molecular studies on "Syzygium"	Ph.D. Biotechnology
5	22PHBCF002	22PHBC03A	Molecular basis of microbiome - related cancer pharmacology	Ph.D. Biochemistry

- a) National Education Policy's Four-year undergraduate programme was well taken by the board. It has recommended that B.Sc. (Hons.) in Life Sciences / Biosciences / Medical Sciences may be offered by School of Biosciences if feasible.
  - b) Dual programmes may be offered by combining Science with Humanities / Social Sciences / Management if feasible.
  - c) Adoption of the Common University Entrance Test (CUET) for all PG\* and Ph.D programmes admission has been recommended with 70% for domicile students and 30 % for all India students.
6. Any other
- The reference books has been updated for all the courses.
  - The board recommended giving stipends to Ph.D scholars to improve the standard of research.
  - The expert recommended shifting the Animal facility elsewhere to adhere the CCSEA guidelines.

*Dr. H. K. Vasth*

*Rashmi*

*D. T.*  
26/4/2023



## Members Present

### Internal Members

1. Dr. Anitha Subash, Professor & Head
2. Dr. S. Gayathri Devi, Professor
3. Dr. Kalaiselvi Senthil, Associate Professor & Assistant Dean, Sponsored Research
4. Dr. S. Sumathi, Associate Professor
5. Dr. N. Santhi, Assistant Professor (SS)
6. Dr. R. Nirmaladevi, Assistant Professor (SG)
7. Dr. S. Velvizhi, Assistant Professor (SS)

*[Signature]* 26/4/2023

*[Signature]* 26/4/23

*[Signature]* 26/4/2023

*[Signature]* 26/4/23

*[Signature]* 26/4/2023

*[Signature]*

*[Signature]* 26/4/23

### External Members

1. Dr. A. Hannah Rachel Vasanthi  
Professor, Department of Biotechnology  
Pondicherry University, Puducherry
2. Dr. Roshin Elizabeth George  
Co-founder & Director, Biovent Innovations Pvt. Ltd  
Thiruvananthapuram, Kerala

*[Signature]* 26/4/2023

*[Signature]* 26/4/2023

### Invited Members

1. Dr. T. Angayarkanni, Associate Professor
2. Dr. D. Kavitha, Assistant Professor
3. Dr. M. Rajeswari, Assistant Professor
4. Dr. S. T. Yamuna, Assistant Professor
5. Dr. E. Nithya, Assistant Professor
6. Dr. K. V. Shalini, Assistant Professor
7. Dr. C. C. S. Vasundhara, Assistant Professor
8. Dr. A. Poornima, Assistant Professor

*[Signature]* 26/4/23

*[Signature]* 26/4/23

*[Signature]* 26/4/2023

*[Signature]* 26/4/23

*[Signature]* 26/4/23

*[Signature]* 26/4/23

*[Signature]* 26/4/23