



## AQAR 2021-22


### 1.1 Curriculum Design and Development

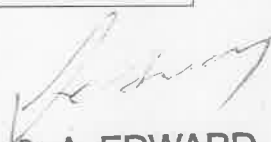
#### 1.1.2 Biotechnology – Board of Studies

### BOARD OF STUDIES IN BIOTECHNOLOGY HELD ON 18.05.2021

#### MEMBERS PRESENT

S.No.	Name	Attendance
	<b><u>UNIVERSITY REPRESENTATIVE</u></b>	
1.	<b>Dr. V. Rajesh Kannan</b> , Associate Professor, Department of Microbiology, Bharathidasan University, Trichy – 620 024,	PRESENT
	<b><u>SUBJECT EXPERT</u></b>	
2.	<b>Dr. V. Ramesh Kumar</b> , Associate Professor and Head, Department of Biotechnology, Sathyabama Institute of Science and Technology, Chennai - 600 119.	PRESENT
	<b><u>INDUSTRIAL EXPERT</u></b>	
3.	<b>Mr. T.R. SasiVarier</b> , Executive Director, K.S.Varier'sAshtangaAyurvedics (P) Ltd. Trichy – 620 102.	PRESENT
4.	Mr. Jayasuriya (Alumnus), 10/23, AnnaiIllam, Ammamandapam Road, Srirangam, Trichy – 620 006	ABSENT
	<b><u>HEAD OF THE DEPARTMENT</u></b>	
5.	Dr. A. Edward	PRESENT
6.	Dr. R. Kamaraj Kennedy, Faculty	PRESENT
7.	Dr. D. Michael Immanuel Jesse, Faculty	PRESENT
8.	Prof. D. Amutha, Faculty	PRESENT

  
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**DEPARTMENT OF BIOTECHNOLOGY  
ST. JOSEPH'S COLLEGE (AUTONOMOUS)  
TRICHY – 620 02**


**MINUTES OF THE BOARD OF STUDIES MEETING**

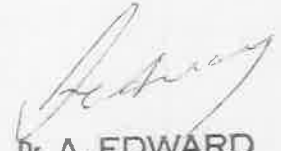
The Board of Studies meeting for M. Sc syllabus revision was held on 18/05/21 at 09.30am through Google Meet (<https://meet.google.com/zjx-zrue-jgn>). The chairman welcomed the board members. The University nominee, Dr. V. Rajesh Kannan, (Associate Professor and Head, Department of Microbiology, Bharathidasan University, Trichy); Subject Expert, Dr. V. Ramesh Kumar (Associate Professor and Head, Department of Biotechnology, Sathyabama Institute of Science and Technology, Chennai); Industrial Expert, Mr. T.R. Sasi Varier (Executive Director, K.S. Varier's Ashtanga Ayurvedics (P) Ltd. Trichy) were present. Mr. R. Jayasurya (Alumnus) was absent. And the faculty members of the Biotechnology Department attended the meeting respectively.

The M. Sc syllabus was placed before the board. The board members went through it and discussed elaborately.

The following changes were done in the syllabus based on the suggestions given by the Stakeholders:

- 1) The Course “Cell Biology” is completely removed from Semester I. Instead of that, the Course “Microbiology” is shifted from Semester II to Semester I.
- 2) Removal of the Laboratory Course “Cell Biology” from Semester I. Instead of that, “Microbiology” experiments are merged with the Laboratory Course I “Molecular Biology” and renamed as the Laboratory Course I “Molecular Biology and Microbiology”.
- 3) In the place of “Microbiology” course in Semester II, the new Core Paper titled “Synthetic Biology” is incorporated.
- 4) Due to the removal of “Microbiology” practical's, the Laboratory Course III is renamed as “Recombinant DNA Technology, Genomics and Immunology”.
- 5) Herbal based foods and drugs are included in the Unit III of “Medical Biotechnology” course.
- 6) The Course “Microbial Biotechnology” is renamed as “Industrial Biotechnology”.
- 7) The Course titled “Intellectual Property Rights (IPR) and Bioethics” in the Semester IV as an elective paper is transformed as a Core paper and shifted to Semester III.
- 8) The Laboratory Course V “Microbial Biotechnology” is renamed as “Industrial Biotechnology”.
- 9) Transformation of “Bionanotechnology” as a Core paper instead of Elective paper in Semester IV.
- 10) Food Biotechnology as a core paper has been transformed as an elective paper and shifted in Semester IV.

  
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- 11) The Minor additions and deletions suggested by the stakeholders are done in the courses titled "Molecular Biology, Biochemistry, Laboratory Course II, Laboratory Course IV, Drug discovery and development and Food Technology" respectively.
- 12) The Remaining courses are retained as such without any additions or deletions in its content.

The suggestions given by the University Representative, Subject Expert, Industrial Expert and Biotechnology Faculties are accepted. Finally, the M. Sc syllabus is modified as per the discussions made, circulated among the board members and approved.

The Previous Value added course titled "Better Health through Beneficial Microbes" will be continued for the next Academic year.

The Question Paper (Pattern 2 Marks) for Semester, Mid& End Semester are unanimously accepted and approved by all the Stakeholders for Biotechnology PG degree.

Finally, the chairman proposed vote of thanks and the meeting came to an end at 1:00 pm.

**(1) Dr. A. Edward – Head & Chairman**

**(2) Dr. V. Rajesh Kannan (University Representative)**

Associate Professor and Head,  
Department of Microbiology, Bharathidasan University, Trichy

**(3) Dr. V. Ramesh Kumar (Subject Expert)**

Associate Professor and Head, Department of Biotechnology,  
Sathyabama Institute of Science and Technology, Jeppiaar Nagar,  
Chennai.

**(4) Mr. T. R. SasiVarier (Industrial Expert)**

Executive Director,  
K.S.Varier'sAshtangaAyurvedics (P) Ltd.Trichy

**(5) Mr. R. Jayasurya (Alumnus)**


**Department Staff Members**

1. Dr. R. Kamaraj Kennedy, Assistant Professor
2. Dr. D. Michael Immanuel Jesse, Assistant Professor
3. Prof. D. Amutha, Assistant Professor

Based on the suggestions given by the stake holders, the M. Sc syllabus is approved.

  
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Various suggestions such as additions or deletions in the content of the courses, removal of courses, inclusion of new courses and renaming of courses given by the Stakeholders are given below:

**Table 1 Suggestions given by the Stakeholders and Action Taken**

S. No	Course & Course code	STAKEHOLDERS				Action Taken
		University Representative (Dr. V. Rajesh Kannan)	Subject Expert (Dr. V. Ramesh Kumar)	Industrial Expert(Mr. T. SasiVarier)	Biotechnology Faculties	
Semester I						
1.	Molecular Biology (21PBT1CC01)	Nil	Suggested to add “Translation of genetic information and its control” in Unit IV.	Nil	Dr. R. Kamaraj Kennedy suggested to add “Translation of genetic information and its control” in Unit IV.	Subject expert and Faculty suggestions are accepted and are added in Unit IV. The Percentage of addition in the course content is 2%.
2.	Biochemistry (21PBT1CC02)	Nil	Suggested to remove “Intermediary metabolism” from Unit IV.	Nil	Dr. R. Kamaraj Kennedy suggested to remove “Intermediary metabolism” from Unit IV.	Subject expert and Faculty suggestions are accepted and removed from Unit IV. The Percentage of removal in the course content is 2%.
3.	Microbiology (21PBT1CC03)	Suggested to remove the Course “Cell	Suggested to introduce new course “Synthetic Biology” in the place of	Suggested to introduce new course.	Dr. A. Edward suggested to remove the Cell	University Representative, Subject expert,

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		Biology" from Semester I and replacing it with the course "Microbiology" from Semester II.	"Microbiology" in Semester II.		Biology course and replace it with "Microbiology".	Industrial expert and Faculty suggestions are accepted. The Cell Biology course is completely removed and replaced with Microbiology paper in Semester I. The Percentage of removal of Cell Biology course is 100%.
4.	Laboratory Course – I Molecular Biology and Microbiology (21PBT1CP01).	Suggested to replace Cell Biology practical's with Microbiology practical's and rename the course title as "Molecular Biology and Microbiology".	Suggested to replace Cell Biology practical's with Microbiology practical's and rename the course title as "Molecular Biology and Microbiology".	Nil	Dr. R. Kamaraj Kennedy suggested to replace the "Cell Biology" practical's with Microbiology practical's.	University Representative, Subject expert, Industrial expert and Faculty suggestions are accepted. Due to the removal of the course "Cell Biology", the Practical's (Cell Biology) are replaced with Microbiology practical's. Hence the Laboratory course title is renamed as "Molecular Biology and Microbiology" (21PBT1CP01). The Percentage of addition in the course

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						content is 50%.
5.	Laboratory Course-II Biochemistry (21PBT1CP02)	Nil	Suggested to mention the exact "estimation method for the analysis of reducing sugar and amino acids".	Nil	Nil	Subject expert suggestion is accepted and added in the course.
6.	Discipline Specific Elective-1 (Developmental Biology) (21PBT1ES1A).	Nil	Nil	Nil	Nil	No additions and deletions are suggested. The course is accepted as such without any modifications.
7.	Discipline Specific Elective-1 (Stem Cell Technology) (21PBT1ES1B).	Nil	Nil	Nil	Nil	No additions and deletions are suggested. The course is accepted as such without any modifications.
8.	AEC – Entrepreneurship skills for Biotechnology (21PBT1AE01).	Nil	Nil	Nil	Nil	No additions and deletions are suggested. The New course is accepted as such without any modifications.
<b>Semester II</b>						
9.	Recombinant DNA Technology (21PBT2CC04)	Nil	Nil	Nil	Nil	No additions and deletions are carried out. The course is accepted as such without any modifications.
10.	Synthetic Biology (21PBT2CC05)	Suggested to add new	Suggested to shuffle in Microbiology	Suggested to add this new course in	All the staff members	The new course is unanimously

  
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		course.	Semester I and replace it with the new course titled "Synthetic Biology" in Semester II.	Semester II	suggested to add "Synthetic Biology" course in Semester II.	accepted. Microbiology paper is shifted to Semester I and new course "Synthetic Biology" is added in the place of Microbiology in Semester II. The new course "Synthetic Biology" (21PBT2CC05) is framed and added in Semester II in the place of Microbiology paper. The Percentage of adding new paper in the syllabus is 100%.
11.	Genomics and Proteomics (21PBT2CC06)	Nil	Nil	Nil	Nil	No additions and deletions are carried out. The course is accepted as such without any modifications.
12.	Laboratory Course III (Recombinant DNA Technology, Genomics and Immunology) (21PBT2CP03)	Suggested to remove Microbiology experiments from the Practical course as the Microbiology paper shifted to	Suggested to remove Microbiology experiments from the Practical course as the Microbiology paper shifted to Semester I.	Nil	Dr. A. Edward suggested to rename the course.	The content of Microbiology experiments is removed from the course content as the course "Microbiology" was shifted to Semester I. Hence the course is

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		Semester I.				renamed as "Recombinant DNA Technology, Genomics and Immunology".The percentage of deletion in the course content is 20%.
13.	Self-Paced Fundamental of Genetics (21PBT2SP01)	Nil	Nil	Nil	Nil	No additions and deletions are carried out. The course is accepted as such without any modifications.
14.	Discipline Specific Elective-2 (Immunology) (21PBT2ES2A)	Nil	Nil	Nil	Nil	No additions and deletions are carried out. The course is accepted as such without any modifications.
15.	Discipline Specific Elective-2 (Cell Signaling) (21PBT2ES2B)	Nil	Nil	Nil	Nil	No additions and deletions are carried out. The course is accepted as such without any modifications.
16.	Generic Elective-2 (WS) Medical Biotechnology (21PBT2EG01)	Nil	Nil	Suggested to add the Herbal based topics in the Unit III (Herbal-Drug and Herb-Food Interactions: Gener al introduction to	Nil	Industrial expert suggestions are accepted and added in Unit III. The Percentage of addition in the course is 10% .

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				interaction and classification. Study of following drugs and their possible side effects & interactions: <i>Gingko biloba</i> , Ginseng, Garlic & Pepper)		
17.	Extra Credit courses (MOOC)-1(21PBT2401)	Nil	Nil	Nil	Nil	All the Stakeholders accepted and approved MOOC-1 Course.
<b>Semester III</b>						
18.	Bioinstrumentation and Research Methodology (21PBT3CC07)	Nil	Nil	Nil	Nil	No additions and deletions are carried out. The course is accepted as such without any modifications.
19.	Industrial Biotechnology (21PBT3CC08)	Nil	Renaming of Microbial Biotechnology as "Industrial Biotechnology".	Nil	Nil	The title change is unanimously accepted and included in the syllabus. No additions and deletions done in the course content.
20.	Intellectual Property Rights (IPR) and Bioethics (21PBT3CC09)	Nil	Suggested to transform the course as Core paper instead of Discipline Elective	Nil	Favoring the point, Dr. D. Michael Immanuel Jesse	The Course which was in the Semester IV as an elective paper is shifted to

  
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			Paper.		also suggested the Course as a Core paper.	Semester III as Core paper.No additions and deletions are carried out. The course is accepted as such without any modifications.
21.	Practical – IV (Bioinformatics and Biostatistics) (21PBT3CP04)	Nil	Suggested to include “Introduction to R programming and its importance in biostatistics”	Nil	Nil	The suggestion is accepted and added in the course. The Percentage of addition in the course content is 5%.
22.	Practical – V (Industrial Biotechnology) (21PBT3CP05)	Suggested to rename the Microbial Biotechnology as “Industrial Biotechnology”	Suggested to rename the Microbial Biotechnology as “Industrial Biotechnology”	Nil	Nil	The title of Laboratory course is renamed as “Industrial Biotechnology”.No additions and deletions are carried out. The course is accepted as such without any modifications.
23.	Discipline Specific Elective-3 (Bioinformatics) (21PBT3ES3A)	Nil	Nil	Nil	Nil	No additions and deletions are carried out. The course is accepted as such without any modifications.
24.	Discipline Specific Elective-3 (Drug Discovery and		Suggested to add “Docking softwares – AutoDock, Hex and		Dr. D. Michael Immanuel Jesse also insisted the	Suggestions given by the Subject expert and the Faculty are

  
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	Development) (21PBT3ES3B)	Nil	PatchDock. Drug validation softwares – PreADMET server” in Unit V.	Nil	addition of the topics “Docking softwares – AutoDock, Hex and PatchDock. Drug validation softwares – PreADMET server” in Unit V.	accepted & are added in Unit V. The Percentage of addition in the course content is 10%.
25.	Generic Elective-1 (BS) Food Technology (21PBT3EG02)	Nil	Suggested to add “Food groups classification; Composition and nutritive value of cereals, millets and pulses; milk and animal products (meat, poultry and fish products)” in Unit I.	Nil	Dr. A. Edward suggested to shift the contents of Unit I to Unit II (Food additives – intentional and non- intentional and their functions).	Suggestions given by both Subject expert and Faculty are accepted & carried out in the course.
26.	Extra Credit courses (MOOC)-2 (21PBT3402)	Nil	Nil	Nil	Nil	All the Stakeholders accepted and approved MOOC-2 Course.
<b>Semester IV</b>						
27.	Bionanotechnology (21PBT4CC10)	Nil	Suggestions are given to rename the Nanobiotechnology course as “Bionanotechnology”	Nil	Nil	Suggestion are accepted and renamed as “Bionanotechnology. This course is accepted as a new Core paper unanimously by all

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						the Stakeholders.
28.	Plant and Animal Biotechnology (21PBT4CC11)	Nil	Nil	Nil	Nil	No additions and deletions are carried out. The course is accepted as such without any modifications.
29.	Practical – VI (Bionanotechnology) (21PBT4CP06)	Nil	Suggested to rename the Laboratory Course as “Bionanotechnology”	Nil	Nil	The Practical Course is renamed as “Bionanotechnology”. No additions and deletions are carried out. The course is accepted as such without any modifications.
30.	Practical – VII (Plant and Animal Biotechnology) (21PBT4CP07)	Nil	Nil	Nil	Nil	No additions and deletions are carried out. The course is accepted as such without any modifications.
31.	Discipline Specific Elective-4 (Environmental Biotechnology) (21PBT4ES4A)	Nil	Nil	Nil	Nil	No additions and deletions are carried out. The course is accepted as such without any modifications.
32.	Discipline Specific Elective-4 (Food Biotechnology) (21PBT4ES4B)	Nil	Suggested to transform the Core paper “Food Biotechnology” as Discipline specific elective paper in	Suggested to include “Herbal based foods” in Unit I.	Prof. D. Amutha has suggested to remove “Spoilage of	Suggestions are accepted and shuffling of the course as elective paper instead of Core

  
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			Semester IV.		vegetables, fruits, meat, poultry, beverage and other food products" from Unit III and merging it with Unit II.	paper has been done. Inclusion of "Herbal based foods" are done in Unit I. Unit III contents are merged with Unit II. The Percentage of addition in the course content is "2%".
33.	Project work & Viva Voce (21PBT4PW01)	Nil	Nil	Nil	Nil	All the Stakeholders accepted and approved "6 hours" for the Project work.
34.	Comprehensive Exam (21PBT4CEO1)	Nil	Nil	Nil	Nil	The "Comprehensive Exam" is accepted and approved by the Stakeholders.
35.	Extra Credit courses (MOOC)-3 (21PBT4403)	Nil	Nil	Nil	Nil	All the Stakeholders accepted and approved MOOC-3 Course.

  
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