

J.J College of Arts and Science (Autonomous)
Sivapuram Post, Pudukkottai – 622 422
(Re-Accredited by NAAC – 4th Cycle)
Affiliated to Bharathidasan University, Tiruchirappalli

PG and Research Department of Microbiology
Minutes of the Board of Studies Meeting


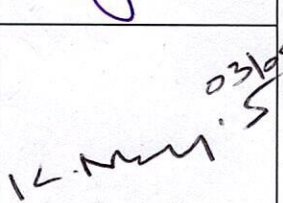
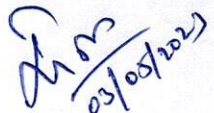
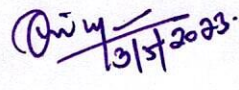
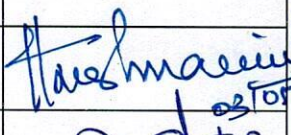

Meeting No.: 07

Date : 03.05.2023

Time : 10.00 a.m.

The Meeting of the Board of Studies in Microbiology (U.G. and P.G.) for the sixth revision of the curricula to be implemented from 2023-2024, was conducted at 10.00 a.m. on Wednesday, 03.05.2023.

Members Present

Sl. No.	Name	Designation	Signature
1.	Dr.P.Jeevan Assistant Professor and Head Department of Microbiology	Chairman	
2.	Dr.K.Natarajaseenivasan Professor, Department of Microbiology, Bharathidasan University, Tiruchirappalli.	University Nominee	
3.	Dr.N.Sivakumar Assistant Professor Department of Molecular Microbiology Madurai Kamaraj University, Madurai	Subject Expert	
4.	Dr.C.Karthikeyan Assistant Professor Department of Biotechnology, Thiyagarajar College (Autonomous), Madurai	Subject Expert	
5.	Ms.R.Krishnaveni Assistant Professor	Faculty Member	
6.	Dr.M.Poornima Assistant Professor	Faculty Member	

7.	Ms.S.VijayaSamoondeeswari Assistant Professor	Faculty Member	<i>V.S. Vijaya Samoondeeswari</i> 3.5.23
8.	Dr.M.Anjugam Assistant Professor	Faculty Member	<i>Dr. M. Anjugam</i> 3/5/23
9.	Dr.K.Srinivasan Adjunct Faculty, National Institute of Food Technology, Entrepreneurship and Management (NIFTEM), Pudukkottai Road, Thanjavur	Representative from Industry	
10.	Ms.K.Parvatham Ph.D. Research Scholar, Department of Microbiology, Bharathidasan University, Tiruchirappalli	Alumni	<i>K. Parvatham</i> 3/5/23

The Chairman, Dr.P.Jeevan chaired the meeting and welcomed all the members to the seventh BoS Meeting. After the brief introduction, the agenda items listed were taken up for discussion and the following resolutions were passed.

It was resolved to

1. As per the instructions from **TANSCHE** and the **Parent University**, it is resolved to include **75 % of mandatory inclusion** content from model syllabus and **25 % of Preferential inclusion** by our Department to preserve equivalence in U.G. and P.G. Degree Programmes to enable student Mobility to be implemented from the academic year **2023 – 2024 onwards** is framed and restructured following the guidelines laid down by the UGC - LOCF and Tamil Nadu State Council for Higher Education (TANSCHE) and the Parent University.
2. Evaluate the Syllabus followed during the Academic Year 2022 – 2023 based on the first Semester Results.
3. Analyze the previous Curriculum based on the feedback received from the Teachers, Employers, Students and the Alumni.
4. Approve the Curriculum, Course Structure (Appendix 1 & 2), Syllabi and Text Books recommended for implementation from 2023-2024 onwards.
5. In the present meeting the General Course Structure for the B.Sc. Microbiology and M.Sc. Microbiology programme, syllabus for the first two semesters were discussed and scrutinized for implementation from the Academic year 2023–2024 onwards based on the communication from the Parent University / TANSCHE.
6. Have the following structure for the UG/PG Programmes respectively.

Distribution of Courses – UG

S.No.	Part	Types of the Courses	No. of Courses	No. of Credits	Marks
1.	I	Language Courses	4	12	400
2.	II	English Courses	4	12	400
3.	III	Core Courses	8	32	800
4.		Core Practical	6	24	600
5.		Project	1	4	100
6.		Discipline Specific Elective Courses	8	24	800
7.	IV	Internship	1	2	100
8.		Skill Enhancement Courses	8	15	800
9.		Ability Enhancement Courses	4	8	400
10.		Value Education	1	2	100
11.		Environmental Studies	1	2	100
12.		Foundation Course	1	2	100
13.		Extension Activity	1	1	-
Total			48	140	4700

Distribution of Courses – PG

S.No.	Types of the Courses	No. of Courses	No. of Credits	Marks
1.	Core Courses	12	48	1200
2.	Discipline Specific Elective Courses	6	18	600
3.	Skill Enhancement Courses	3	6	300
4.	Professional Competency Course	1	2	100
5.	Industry Module	1	3	100
6.	Project Work	1	3	100
7.	Ability Enhancement Compulsory Course	4	8	400
8.	Internship	1	2	100
9.	Extension Activity	1	1	-
Total		30	91	2900

7. Allow earning Extra Credits through Courses under SWAYAM-MOOC's – NPTEL, CEC, NCERT, UGC.
8. Apply Revised Bloom's Taxonomy in spelling out Course Outcomes.
9. **Implement the following guidelines on Curriculum design given by NAAC**
 - a. Specific mention has been made of Program outcomes (POs), Program specific outcomes (PSOs), Course Outcomes (COs),
 - b. Relationship Matrix for CO, PO and PSO for all courses implemented.
 - c. Curriculum addresses local, Regional, National and Global Needs
 - d. Courses focus on Employability, Entrepreneurship and Skill Development
 - e. Courses also focus on Gender, Environment and Sustainability, Human values and Professional Ethics.
10. Introduce Internship/Industrial Visit/ Field Visit during Semester – IV Summer vacation.
11. Introduce Foundation Course (FC) as a new course in the 1st semester.
12. Environmental Studies (IV Semester) and Value Education (V Semester) courses to be followed as per the previous curriculum.
13. **Resolved to have the following 12 Core Courses in the 6 semesters of UG**

SEMESTER I

1. Fundamentals of Microbiology and Microbial Diversity
2. Fundamentals of Microbiology and Microbial Diversity Practical

SEMESTER II

3. Microbial Physiology and Metabolism
4. Microbial Physiology and Metabolism Practical

SEMESTER III

5. Molecular Biology & Microbial Genetics
6. Molecular Biology & Microbial Genetics Practical

SEMESTER IV

7. Immunology & Immunotechnology
8. Immunology & Immunotechnology Practical

SEMESTER V

9. Bacteriology & Mycology
10. Virology & Parasitology
11. Bacteriology & Mycology, Virology & Parasitology Practical

SEMESTER VI

12. Environmental & Agriculture Microbiology
13. Food, Dairy and Probiotic Microbiology
14. Environmental & Agriculture Microbiology, Food, Dairy and Probiotic Microbiology Practical

14. Resolved to have the following 8 Discipline Specific Elective Courses

1. Basic and Clinical Biochemistry
2. Bioinstrumentation
3. Clinical Laboratory Technology **(Newly Introduced Course)**
4. Food Processing Technology **(Newly Introduced Course)**
5. Recombinant DNA Technology **(Newly Introduced Course)**
6. Biosafety & Bioethics **(Newly Introduced Course)**
7. Pharmaceutical Microbiology
8. Entrepreneurship & Bio-Business **(Newly Introduced Course)**

15. Resolved to introduce 2 Non-Major Elective (Skill Enhancement Courses) as a new Course offered to other department.

1. Social and Preventive Medicine **(Newly Introduced Course)**
2. Nutrition and Health Hygiene **(Newly Introduced Course)**

16. Resolved to introduce 2 Non-Major Electives (Skill Enhancement Courses) as a new Course opted from other department in Semester I and II.

17. Resolved to have the following Skill Enhancement Courses

1. Sericulture **(Newly Introduced Course)**
2. Organic Farming & Biofertilizer Technology **(Newly introduced Course)**
3. Aquaculture **(Newly introduced Course)**
4. Vaccine Technology **(Newly introduced Course)**
5. Apiculture **(Newly introduced Course)**
6. Microbial Quality Control & Testing **(Newly introduced Course)**

18. Resolved to introduce 4 Ability Enhancement Compulsory Courses **(Soft Skills) as a new Courses in Semester **I, II, III & IV.****

19. Resolved to have the following 12 Core Courses in the 4 semesters of PG

SEMESTER I

1. General Microbiology and Microbial Diversity
2. Immunology, Immunomics and Microbial Genetics
3. Practical I

SEMESTER II

4. Medical Bacteriology and Mycology
5. Medical Virology and Parasitology
6. Practical II

SEMESTER III

7. Soil & Environmental Microbiology
8. Recombinant DNA Technology & Biotechnology
9. Practical III

SEMESTER IV

10. Food & Dairy Microbiology
11. Research Methodology & Biostatistics
12. Practical IV **(Newly Introduced Course)**

20. Resolved to have the following 6 Elective Courses

1. (i) Forensic Science **(Newly Introduced Course)**
(ii) Health Hygiene **(Newly Introduced Course)**
(iii) Microalgal Technology **(Newly Introduced Course)**
2. (i) Bioinstrumentation **(Newly Introduced Course)**
(ii) Herbal Technology and Cosmetic Microbiology **(Newly Introduced Course)**
(iii) Essentials of Laboratory Management and Biosafety **(Newly Introduced Course)**
3. (i) Epidemiology **(Newly Introduced Course)**
(ii) Clinical Diagnostic Microbiology **(Newly Introduced Course)**
(iii) Bioremediation **(Newly Introduced Course)**
4. (i) Bioinformatics
(ii) Nanobiotechnology **(Newly Introduced Course)**
(iii) Clinical Research and Clinical Trails **(Newly Introduced Course)**

5. (i) Biosafety, Bioethics and IPR
 - (ii) Toxinology (Newly Introduced Course)
 - (iii) Water Conservation and Water Treatment Technologies (Newly Introduced Course)
6. (i) Bioenergy (Newly Introduced Course)
 - (ii) Marine Microbiology
 - (iii) Life Sciences for Competitive Examinations (Newly Introduced Course)

21. Resolved to have the following Skill Enhancement Courses

1. Vermitechnology (Newly Introduced Course)
2. Organic farming and Biofertilizer Technology (Newly introduced Course)
3. Microbial Quality Control and Testing (Newly introduced Course)

22. Introduce Professional Competency Course – Entrepreneurship in Biobusiness as a new Course in Semester I.

23. Introduce Industry Module – Fermentation Technology and Pharmaceutical Microbiology in Semester II.

24. Introduce Internship as a new activity during the Summer Vacation of Semester II.

25. Resolved to introduce 4 Ability Enhancement Compulsory Courses (Soft Skill) as a new Courses in Semester I, II, III & IV.

1. *[Signature]*
03/05/2023

[Signature]
03/05/2023
(Dr. K. NATARAJ BEENAMAN)

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03/05/2023

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03/05/2023
(R. KRISHNA VENI)

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03/05/23
(K. POORNIMA)

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03/05/2023

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03/05/23
(Dr. M. Anjugam)

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(Dr. M. Anjugam)

J.J. College of Arts and Science (Autonomous),

Department of Microbiology

B.Sc. Microbiology

Proposed Course Structure based on TANSCHÉ and UGC – LOCF

(Choice Based Credit System)

(Applicable for the Candidates admitted from academic year 2023-2024 Onwards)

Sl.No.	Course Category	Course Code	Course	Overall Credits	Total Contact Hours/Week	Marks		
						CIA	ESE	Total
Semester I								
1	Part - I	U1R3TL1/HL1/FL1	Language (Tamil/Hindi/French)	3	6	25	75	100
2	Part - II	U1R3EL1	English	3	4	25	75	100
3	Part - III	U1R3MBCC1	Fundamentals of Microbiology and Microbial Diversity	4	5	25	75	100
4		U1R3MBCC2P	Practical I – CC1	4	5	40	60	100
5		U1R3MBDSE1	Basic and Clinical Biochemistry	3	4	25	75	100
6	Part - IV	U1R3MBSEC1 (NME)	Social and Preventive Medicine (Offered to other Department)	2	2	25	75	100
7		U1R3MBFC	Foundation Course	2	2	25	75	100
8		U1R3AECC1	Soft Skill – I – Introduction to Study Skill	2	2	25	75	100
Total				23	30			800
Semester II								
9	Part - I	U2R3TL2/HL2/FL2	Language (Tamil/Hindi/French)	3	6	25	75	100
10	Part - II	U2R3EL2	English	3	4	25	75	100
11	Part - III	U2R3MBCC3	Microbial Physiology and Metabolism	4	5	25	75	100
12		U2R3MBCC4P	Practical II – CC3	4	5	40	60	100
13		U2R3MBDSE2	Bioinstrumentation	3	4	25	75	100
14	Part - IV	U2R3MBSEC2 (NME)	Nutrition & Health Hygiene (Offered to other Department)	2	2	25	75	100
15		U2R3MBSEC3	Sericulture	2	2	25	75	100
16		U2R3AECC2	Soft Skill – II – Life Skill	2	2	25	75	100
Total				23	30			800
Semester III								
17	Part I	U3R3TL3/HL3/FL3	Language (Tamil/Hindi/French)	3	6	25	75	100
18	Part II	U3R3EL3	English	3	4	25	75	100
19	Part III	U3R3MBCC5	Molecular Biology & Microbial Genetics	4	5	25	75	100
20		U3R3MBCC6P	Practical III – CC5	4	5	40	60	100
21		U3R3MDSE3	Clinical Laboratory Technology	3	3	25	75	100
22	Part IV	U3R3MBSEC4	Organic Farming & Biofertilizer Technology	1	2	25	75	100

12. May 2023
(Dr. K. MATHARAJAN)

Dr. N. SIVAKUMAR

Dr. C. KARTHIKEYAN

Dr. P. JAYARAJ

23		U3R3MBSEC5	Aquaculture	2	2	25	75	100
24		U3R3AECC3	Soft Skill – III – Job Oriented Skill	2	2	25	75	100
		U4R3ES	EVS		1			
Total				22	30			800
Semester IV								
25	Part I	U4R3TL4/HL4/F L4	Language (Tamil/Hindi/French)	3	6	25	75	100
26	Part II	U4R3EL4	English	3	4	25	75	100
27	Part III	U4R3MBCC7	Immunology & Immunotechnology	4	4	25	75	100
28		U4R3MBCC8P	Practical IV – CC7	4	5	40	60	100
29		U4R3MBDSE4	Recombinant DNA Technology	3	4	25	75	100
30	Part IV	U4R3MBSEC6	Vaccine Technology	2	2	25	75	100
31		U4R3MBSEC7	Apiculture	2	2	25	75	100
32		U4R3AECC4	Soft Skill – IV – Computing Skill	2	2	25	75	100
33		U4R3ES	EVS	2	1	25	75	100
Total				25	30			900
Semester V								
34	Part III	U5R3MBCC9	Bacteriology & Mycology	4	5	25	75	100
35		U5R3MBCC10	Virology & Parasitology	4	5	25	75	100
36		U5R3MBCC11P	Practical V – CC9, CC10	4	5	40	60	100
37		U5R3MBPW12	Group Project	4	5	25	75	100
38		U5R3MDSE5	Food Processing Technology	3	4	25	75	100
39		U5R3MDSE6	Biosafety & Bioethics	3	4	25	75	100
40	Part IV	U5R3VE	Value Education	2	2	25	75	100
41		U5R3MBINT	*Internship/Industrial Visit/ Field Visit	2	-	25	75	100
Total				26	30			800
Semester VI								
42	Part III	U6R3MBCC13	Environmental & Agriculture Microbiology	4	6	25	75	100
43		U6R3MBCC14	Food, Dairy and Probiotic Microbiology	4	6	25	75	100
44		U6R3MBCC15P	Practical VI – CC13, CC14	4	6	40	60	100
45		U6R3MDSE7	Pharmaceutical Microbiology	3	5	25	75	100
46		U6R3MDSE8	Entrepreneurship & Bio-Business	3	5	25	75	100
47	Part IV		Extension Activity	1	-	-	-	-
48		U6R3MBSEC8	Microbial Quality Control & Testing	2	2	25	75	100
Total				21	30			600

* Internship during Semester – IV Summer Vacation. The Credits shall be awarded in Semester – V
Statement of Marks

12.11.2023
K. Kumar

Dr. N. SIVA KUMAR

Dr. C. KARITHA (LEARN)

Dr. P. JEEVA

Non Major Electives (Offered to other Department)

1. Social and Preventive Medicine
2. Nutrition & Health Hygiene

Skill Enhancement Courses

1. (i) Sericulture
(ii) Veterinary Microbiology
2. (i) Organic Farming & Biofertilizer Technology
(ii) Microbial Inoculants
3. (i) Aquaculture
(ii) Mushroom Technology
4. (i) Vaccine Technology
(ii) Medical Lab Technology
5. (i) Apiculture
(ii) Good Laboratory Practices
6. (i) Microbial Quality Control and Testing
(ii) Microbial Ecology

14. Mar 5 03/05/22

Dr. M.
03/05/22

Dr. N. SIVAKUMAR

Dr. C.
03/05/22

(Dr. C. KARTHIGEYAN)

P. J.
03/05/22

(Dr. P. JEEVA)

K. P.
03/05/22

(K. Parvathamma)

J.J. College of Arts and Science (Autonomous),

Department of Microbiology

M.Sc. Microbiology

Proposed Course Structure based on TANSCHÉ and UGC – LOCF

(Choice Based Credit System)

(Applicable for the Candidates admitted from academic year 2023-2024 Onwards)

Sl.No.	Course Code	Course	Overall Credits	Total Contact Hours/Week	Marks		
					CIA	ESE	Total
Semester I							
1	P1R3MBCC1	General Microbiology & Microbial Diversity	4	6	25	75	100
2	P1R3MBCC2	Immunology, Immunomics & Microbial Genetics	4	6	25	75	100
3	P1R3MBCC3P	Practical I – CC1, CC2	4	6	40	60	100
4	P1R3MBDSE1	Any one from the list	3	4	25	75	100
5	P1R3MBDSE2	Any one from the list	3	4	25	75	100
6	P1R3MBPCC	Entrepreneurship in Biobusiness	2	2	25	75	100
7	P1R3AECC1	Soft Skill - I	2	2	25	75	100
Total			22	30			700
Semester II							
8	P2R3MBCC4	Medical Bacteriology & Mycology	4	6	25	75	100
9	P2R3MBCC5	Medical Virology & Parasitology	4	6	25	75	100
10	P2R3MBCC6P	Practical II – CC4, CC5	4	6	40	60	100
11	P2R3MBDSE3	Any one from the list	3	4	25	75	100
12	P2R3MBDSE4	Any one from the list	3	4	25	75	100
13	P2R3MBSEC1	Vermitechnology	2	2	25	75	100
14	P2R3AECC2	Soft Skill - II	2	2	25	75	100
		Internship / Industrial Activity	-	-	-	-	-
Total			22	30			700
Semester III							
15	P3R3MBCC7	Soil & Environmental Microbiology	4	6	25	75	100
16	P3R3MBCC8	Recombinant DNA Technology & Biotechnology	4	6	25	75	100
17	P3R3MBCC9P	Practical III – CC7, CC8	4	6	40	60	100
18	P3R3MBDSE5	Any one from the list	3	4	25	75	100
19	P3R3MBIM	Fermentation Technology & Pharmaceutical Microbiology	3	4	25	75	100
20	P3R3MBSEC2	Organic Farming & Biofertilizer Technology	2	2	25	75	100
21	P3R3AECC3	Soft Skill - III	2	2	25	75	100
22		*Internship / Industrial Activity	2	-	25	75	100
Total			24	30			800

12. May 2023
(Dr. K. Nataraja Sekhara)

Dr. N. S. Iyengar

Dr. C. Karthikeyan

Semester IV							
23	P4R3MBCC10	Food & Dairy Microbiology	4	6	25	75	100
24	P4R3MBCC11	Research Methodology & Biostatistics	4	6	25	75	100
25	P4R3MBCC12P	Practical IV – CC10, CC11	4	6	40	60	100
26	P4R3MBDSE6	Any one from the list	3	4	25	75	100
27	P4R3MBPW13	Project Work	3	4	40	60	100
28	P4R3MBSEC3	Microbial Quality Control and Testing	2	2	25	75	100
29	P4R3AECC4	Soft Skill IV	2	2	25	75	100
		Extension Activity	1	-	-	-	-
Total			23	30			700

* Internship during Semester – II Summer Vacation. The Credits shall be awarded in Semester –III Statement of Marks.

Discipline Specific Electives

1. (i) Forensic Science
(ii) Health & Hygiene
(iii) Microalgal Technology
2. (i) Bioinstrumentation
(ii) Herbal Technology & Cosmetic Microbiology
(iii) Essentials of Laboratory Management and Biosafety
3. (i) Epidemiology
(ii) Clinical and Diagnostic Microbiology
(iii) Bioremediation
4. (i) Bioinformatics
(ii) Nanobiotechnology
(iii) Clinical Research and Clinical Trails
5. (i) Biosafety, Bioethics & IPR
(ii) Toxinology
(iii) Water Conservation and Water Treatment Technologies
6. (i) Bioenergy
(ii) Marine Microbiology
(iii) Life Sciences for Competitive Examinations

12.11.23

Dr. N. S. Lakshmi

Dr. N. S. Lakshmi

(K. Parvatham)

Dr. C. (Karthikeyan)

P. J. (D.P. Jeyam)