



Anekant Education Society's

**Tuljaram Chaturchand College  
of Arts, Science, Commerce, Baramati  
(Autonomous)**

**DEPARTMENT OF MICROBIOLOGY**

(Faculty of Science and Technology)

**Minutes of Board of Studies Meeting No.5**

**Date of Meeting: 09/03/2022**

**Venue: Department of Microbiology**

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March, 2022

Anekant Education Society's  
Tuljaram Chaturchand College, Baramati  
Department of Microbiology

**NOTICE**

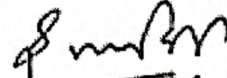
Date: - 25/02/2022

An Online meeting of BOS members of Microbiology is scheduled on 09<sup>th</sup> Mar. 2022 at 11.00 am onwards. All BOS members are requested to attend the meeting.

*The agenda of meeting is as follows.*

1. To confirm the minutes of the previous meeting held on 07/12/2021.
2. To design the academic framework of B.Sc program & syllabus of F.Y.B.Sc. program (2022 pattern).
3. To design the academic framework of M.Sc program and syllabus of M.Sc. I (2022 pattern).
4. To discuss and incorporate the relevant feedbacks of the stakeholders (Students, Teachers, Parents, alumni, and employers) in the curriculum.
5. Any other matter with the permission of the chair.

*Yours faithfully*



**Dr. S.T. Pawar**  
Chairman BOS in Microbiology.

Anekant Education Society's  
Tuljaram Chaturchand College, Baramati  
(Autonomous)

Department of Microbiology

**AGENDA OF THE MEETING**

The agenda of the meeting included the following subjects:

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1. To confirm the minutes of the previous meeting held on 07/12/2021.
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3. To design the academic framework of M.Sc program and syllabus of M.Sc. I (2022 pattern).
4. To discuss and incorporate the relevant feedbacks of the stakeholders (Students, Teachers, Parents, alumni, and employers) in the curriculum.
5. Any other matter with the permission of the chair.

**List of Members Present for the BOS Meeting**

The following internal and external BOS member's has attended the Board of Studies (Microbiology) meeting held on 9<sup>th</sup> March, 2022.

Sr. No.	Name of Member	Designation
1.	<b>Dr. Sunil Pawar</b> Associate Professor, Department of Microbiology, T. C. College, Baramati.	Chairman
2.	<b>Dr. Milind Gajbhiye</b> Associate Professor, Department of Microbiology, T. C. College, Baramati.	Member
3.	<b>Dr. Mrs. Yogini Mulay</b> Associate Professor, Department of Microbiology, T. C. College, Baramati.	Member
4.	<b>Mr. Dhaval Doshi</b> Assistant Professor, Department of Microbiology, T. C. College, Baramati.	Member
5.	<b>Ms. Komal Jagtap</b> Assistant Professor, Department of Microbiology, T. C. College, Baramati.	Member
6.	<b>Ms. Priti Bhosale</b> Assistant Professor, Department of Microbiology, T. C. College, Baramati.	Member
7.	<b>Dr. Mrs. Snehal Kulkarni</b> Associate Professor, Department of Microbiology, Pune.	Expert from SPPU
8.	<b>Mr. Pradip Lonkar</b> Assistant Professor, Department of Microbiology, T. C. College, Baramati.	Industry Expert
9.	<b>Ms. Chaitrali Pathak</b>	Student representative
10.	<b>Ms. Prakjakta Markale</b>	Student representative

## MINUTES OF THE MEETING

Concerning the Notice dated 25/02/2022, issued by the college, the meeting of Board of Studies in Microbiology was held on 9<sup>th</sup> March, 2022 at 11:30 am in the Department of Microbiology, T. C. College, Baramati. The meeting was conducted adhering to the guidelines and protocols set by the college. Dr. M.H. Gajbhiye introduced the newly elected members of BoS. Dr. Snehal Kulkarni and Mr. Pradip Lonkar were felicitated by Dr. S.T. Pawar, Chairman, BoS. Dr. Gajbhiye gave the introduction and presented the agenda of meeting.

### 1. To confirm the minutes of the BOS meeting held on 07/12/2021.

Dr. M. H. Gajbhiye read the minutes of the BOS meeting held on 07/12/2021 and put forward to the BOS members for the approval.

**Resolution No. 1:** The minutes of the previous Board of Studies meeting were approved and confirmed.

### 2. To design the academic framework for B.Sc program & Syllabus for F. Y. B. Sc. Sem I & II (2022 Pattern).

The basic draft of syllabus of F.Y.B.Sc. Sem-I and Sem II - USMB111: Introduction to Microbiology I, USMB112: Basic techniques in Microbiology I, USMB121: Introduction to Microbiology II, USMB122: Basic techniques in Microbiology II was presented by Dr. Gajbhiye and Ms. Priti Bhosale. The draft of practical course, USMB113 and USMB123 were presented by Ms. Priti Bhosale. The syllabus was discussed among the members of BoS before finalization. This syllabus was sent by E-mail to all the members of BoS, fifteen days before the scheduled BoS meeting.

The syllabus was discussed meticulously and the curriculum of the following courses was finalized as shown below.

#### Course structure for F.Y.B.Sc Sem-I Microbiology (2022 pattern)

Class	Pattern	Semester	Course Code	Course Title	Course Type	Number of Credits
F.Y.B.Sc.	2022	I	USMB111	Introduction to Microbiology I	Theory	2
F.Y.B.Sc.	2022	I	USMB112	Basic Techniques in Microbiology I	Theory	2
F.Y.B.Sc.	2022	I	USMB113	Practical course I	Practical	2

F.Y.B.Sc.	2022	II	USMB121	Introduction to Microbiology II	Theory	2
F.Y.B.Sc.	2022	II	USMB122	Basic Techniques in Microbiology I	Theory	2
F.Y.B.Sc.	2022	II	USMB123	Practical course I	Practical	2
						Total= 12
S.Y.B.Sc.	2022	III	USMB231	Bacterial Systematics and Physiology	Theory	3
S.Y.B.Sc.	2022	III	USMB232	Fundamentals Of Soil and Industrial Microbiology	Theory	3
S.Y.B.Sc.	2022	III	USMB233	Practical course I	Practical	2
S.Y.B.Sc	2022	IV	USMB241	Air and Water Microbiology	Theory	03
S.Y.B.Sc	2022	IV	USMB242	Bacterial Genetics	Theory	03
S.Y.B.Sc	2022	IV	USMB243	Practical course based on USMB241 and USMB242	Practical	02
						Total= 14

**Course structure for T.Y.B.Sc Microbiology (2022 pattern)**

T.Y.B.Sc.	2022	V	USMB351	Medical Microbiology I	Theory	3
T.Y.B.Sc.	2022	V	USMB352	Genetics and Molecular Biology I	Theory	3
T.Y.B.Sc.	2022	V	USMB353	Enzymology	Theory	3
T.Y.B.Sc.	2022	V	USMB354	Immunology-I	Theory	3
T.Y.B.Sc.	2022	V	USMB355	Fermentation Technology-I	Theory	3
T.Y.B.Sc.	2022	V	USMB356	Food and Dairy Microbiology and	Theory	3
T.Y.B.Sc.	2022	V	USMB357	Applied Microbiology	Practical	2
T.Y.B.Sc.	2022	V	USMB358	Biochemistry	Practical	2
T.Y.B.Sc.	2022	V	USMB359	Clinical Microbiology	Practical	2
T.Y.B.Sc.	2022	V	Certificate course			2
	2022					Total = 26
T.Y.B.Sc.	2022	VI	USMB361	Medical Microbiology II	Theory	3

T.Y.B.Sc.	2022	VI	USMB362	Genetics and Molecular Biology II	Theory	3
T.Y.B.Sc.	2022	VI	USMB363	Metabolism	Theory	3
T.Y.B.Sc.	2022	VI	USMB364	Immunology-II	Theory	3
T.Y.B.Sc.	2022	VI	USMB365	Fermentation Technology-II	Theory	3
T.Y.B.Sc.	2022	VI	USMB366	Agricultural and Environmental Microbiology	Theory	3
T.Y.B.Sc.	2022	VI	USMB367	Biochemistry and Molecular Biology	Practical	2
T.Y.B.Sc.	2022	VI	USMB368	Haematology and Diagnostic Immunology	Practical	2
T.Y.B.Sc.	2022	VI	USMB369	Project	Project	2
						Total = 24
						Grand total = 50

The syllabus for F.Y.BSc Sem-I &II was discussed meticulously and the curriculum of the following courses was finalized as shown below.

Class	Pattern	Semester	Course Code	Course Title	Course Type	Number of Credits
F.Y.B.Sc.	2022	I	USMB111	Introduction to Microbiology I	Theory	2
F.Y.B.Sc.	2022	I	USMB112	Basic Techniques in Microbiology I	Theory	2
F.Y.B.Sc.	2022	I	USMB113	Practical course I	Practical	2
F.Y.B.Sc.	2022	II	USMB121	Introduction to Microbiology II	Theory	2
F.Y.B.Sc.	2022	II	USMB122	Basic Techniques in Microbiology I	Theory	2
F.Y.B.Sc.	2022	II	USMB123	Practical course I	Practical	2
						Total= 12

**Resolution No. 2:** The syllabus and academic framework of FYBSc (2022 Pattern) has been unanimously approved by all members of the BOS.

3. To design the academic framework for M. Sc. Program and syllabus for M.Sc-I Sem-I & II (2022 Pattern).

The basic draft of the syllabi of M.Sc. Sem-I and Sem-II, PSMB111: Microbial Systematics and Diversity, PSMB112: Quantitative Biology, PSMB113: Biochemistry, PSMB114: Cell Biology, PSMB121: Virology, PSMB122: Instrumentation, PSMB123: Metabolism, PSMB124: Evolution and Ecology, Practical Course PSMB115: Microbial systematics, PSMB116: Cell biology and biochemistry, PSMB125: Biophysics and Virology, PSMB126: Enzymology and Microbial Metabolism were presented by Mr. D.V. Doshi, Ms. Komal Jagtap. This syllabus was sent by E-mail to all the members of BoS, fifteen days before the scheduled BoS meeting.

Following suggestions and comments were received from the BoS members through online mode:

By Dr. A.V. Petkar

I have added specific suggestions in track changes mode wherever deemed necessary. Overall the contents of this practical course seem fine.

PSMB114 Cell biology- A point on specialized compartments such as lysosomes and endosomes may be added

Two suggestion regarding practical course PSMB 116 Cell biology and biochemistry-

A point on probability distribution curve and its uses in checking data quality may be added.

A point on research ethics and should be added. Also a point on protocol on disaster management of accidental spillage of hazardous chemicals/cultures may be added.

1. Proper formatting is required for all the papers.

2. Overall syllabus is good. The core content of each paper is strong and complete.

By Mr. Vipul Nilkanth

I have gone through the syllabus of M.Sc. Microbiology Part I course. I suggest following modifications in the syllabus I have made suggestions in few subjects as detailed in the file attached with this email.

PSMB 122: Instrumentation

Electrophoresis: Add (i) preparative electrophoresis, (ii) autoradiography

Practical PSMB 125 Biophysics and Virology

DELETE: Biological synthesis of nanoparticles

DELETE: Calibration of colorimeter/spectrophotometer by estimation of biomolecules



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Add: Density gradient centrifugation in Separation of biomolecules

Add: Paper chromatography and TLC

PSMB 113 Biochemistry

Unit 1: Add pKa of weak acids/bases and pH titration curve for weak acids/bases

Unit 4: Add water soluble vitamin

By T.A.Kadam

I have gone through the syllabus of M.Sc. Microbiology Part I course. I suggest following modifications in the syllabus

PSMB 114 Cell Biology

Unit 1: Add Biomembrane

Unit 2: Add Transport across membranes

By Dr.Snehal Kulkarni

I have gone through the modified version of F.Y.BSc and M.Sc syllabus and found it to be correct and justifiable.

From my side this version of syllabus is suitable to be accepted and released for students.

I appreciate the efforts taken by you and your staff members and have addressed all suggestions received at the meeting very positively.

By Mr Pradip Lonkar

I have gone through the syllabus of M.Sc. Microbiology Part I . I suggest following modifications in the syllabus:

PSMB 113 Biochemistry

Add Relation between PH and dissolved Oxygen

We also reached a consensus that content of syllabi is appropriate as per the respective title of paper. I anticipate that the syllabi of various papers will be compiled and edited maintaining the uniform formatting in a single file. Certain spellings errors can be corrected. As a member of 'Board of Studies' in Microbiology at T.C. College, Baramati I approve the content of syllabi and recommend for its implementation.

The syllabus was discussed meticulously and the curriculum of the following courses was finalized as shown below.

## Course structure for M.Sc. I Microbiology (2022 pattern)

Class	Pattern	Semester	Course Code	Course Title	Course Type	No. of Credits
M.Sc.	2022	I	PSMB111	Microbial Systematics and Diversity	Theory	4
M.Sc.	2022	I	PSMB112	Quantitative Biology	Theory	4
M.Sc.	2022	I	PSMB113	Biochemistry	Theory	4
M.Sc.	2022	I	PSMB114	Cell Biology	Theory	4
M.Sc.	2022	I	PSMB115	Practical Course: Microbial Systematics	Practical	4
M.Sc.	2022	I	PSMB116	Practical Course: Cell biology and Biochemistry	Practical	4
M.Sc.	2022	II	PSMB121	Virology	Theory	4
M.Sc.	2022	II	PSMB122	Instrumentation	Theory	4
M.Sc.	2022	II	PSMB123	Metabolism	Theory	4
M.Sc.	2022	II	PSMB124	Evolution and Ecology	Theory	4
M.Sc.	2022	II	PSMB125	Practical Course: Biophysics & Virology	Practical	4
M.Sc.	2022	II	PSMB126	Practical Course: Enzymology & Microbial Metabolism	Practical	4
M.Sc.	2022	II	CC40	Research Methodology		2
						Total= 50

## Course structure for M.Sc. II Microbiology (2022 pattern)

M.Sc.	2022	III	PSMB231	Immunology	Theory	4
M.Sc.	2022	III	PSMB232	Molecular Biology I	Theory	4
M.Sc.	2022	III	PSMB233	Industrial waste water treatment	Theory	4
M.Sc.	2022	III	PSMB234 (A)	Biophysical Techniques	Theory	4
M.Sc.	2022	III	PSMB234 (B)	Developmental Biology	Theory	4
M.Sc.	2022	III	PSMB235	Practical course based on Immunology, Pharmaceutical Microbiology and Industrial waste water treatment	Practical	4
M.Sc.	2022	III	PSMB236	Practical course based on Molecular Biology and Microbial Technology	Practical	4
M.Sc.	2022	III	SD23	Skill development I		2
						Total= 30
M.Sc.	2022	IV	PSMB241	Pharmaceutical Microbiology	Theory	4
M.Sc.	2022	IV	PSMB242	Molecular Biology II	Theory	4

M.Sc.	2022	IV	PSMB243	Microbial Technology	Theory	4
M.Sc.	2022	IV	PSMB244 (A)	Medical Microbiology	Theory	4
M.Sc.	2022	IV	PSMB244 (B)	Mathematics for Biological Science	Theory	4
M.Sc.	2022	IV	PSMB245	Dissertation I	Project	4
M.Sc.	2022	IV	PSMB246	Dissertation II	Project	4
M.Sc.	2022	IV	SD24	Skill development II		2
						Total= 30

The syllabus for MSc Sem-I &II was discussed meticulously and the curriculum of the following courses was finalized as shown below.

Class	Pattern	Semester	Course Code	Course Title	Course Type	No. of Credits
M.Sc.	2022	I	PSMB111	Microbial Systematics and Diversity	Theory	4
M.Sc.	2022	I	PSMB112	Quantitative Biology	Theory	4
M.Sc.	2022	I	PSMB113	Biochemistry	Theory	4
M.Sc.	2022	I	PSMB114	Cell Biology	Theory	4
M.Sc.	2022	I	PSMB115	Practical Course: Microbial Systematics	Practical	4
M.Sc.	2022	I	PSMB116	Practical Course: Cell biology and Biochemistry	Practical	4
M.Sc.	2022	II	PSMB121	Virology	Theory	4
M.Sc.	2022	II	PSMB122	Instrumentation	Theory	4
M.Sc.	2022	II	PSMB123	Metabolism	Theory	4
M.Sc.	2022	II	PSMB124	Evolution and Ecology	Theory	4
M.Sc.	2022	II	PSMB125	Practical Course: Biophysics & Virology	Practical	4
M.Sc.	2022	II	PSMB126	Practical Course: Enzymology & Microbial Metabolism	Practical	4
M.Sc.	2022	II	CC40	Research Methodology		2
						Total= 50

**Resolution No. 3:** The syllabus and academic framework of M.Sc. (2022 Pattern) has been unanimously approved by all members of the BOS.

All the BoS members discussed the syllabus throughout and approved it after the inclusion of appropriate comments. Also, the students' feedback was collected, and appropriate suggestions were incorporated in the syllabus.

- 4. To discuss and incorporate the relevant feedbacks of the stakeholders (Students, Teachers, Parents, alumni, and employers) in the curriculum.

- **Feedback received for Course structure for F.Y.B.Sc Sem-I Microbiology (2022 pattern):**

**From Students:** The syllabus covers a broad range of microbiological topics, allowing students to explore different facets of the field. Courses seem to progress in complexity, ensuring a gradual build up of knowledge over the three years.

**From Teachers:** The courses are logically structured, facilitating effective teaching plans with a clear progression of topics. The combination of theory and practical courses allows for a comprehensive teaching approach, reinforcing theoretical concepts with practical applications. The inclusion of a project in the final year provides an opportunity for students to apply their knowledge in a practical setting.

**From Parents:** Parents appreciated the focus on practical skills, seeing it as valuable for their child's future. The diverse range of topics covered in the syllabus may be seen as offering a well-rounded education.

**From Alumni:** Alumni appreciated the holistic preparation the syllabus provides, covering various aspects of microbiology. Courses like Applied Microbiology and the project component suggest that graduates are equipped with practical skills.

**From Employers:** Graduates from this program are likely to possess a practical skill set, especially in areas like clinical microbiology and fermentation technology.

- **Feedback received for Course structure for M.Sc Sem-I Microbiology**

**From Students:** The syllabus covers a wide range of microbiological topics, providing students with a comprehensive understanding of the field. The incorporation of skill development courses, such as Research Methodology and Skill Development I and II, suggests a focus on holistic development.

**From Teachers:** The syllabus is logically organized, facilitating effective planning and teaching strategies. The inclusion of dissertation projects and skill development courses indicates a focus on research-oriented thinking.

**From Parents:** The diverse range of topics covered in the syllabus may be seen as offering a well-rounded education.

**From Alumni:** Alumni appreciated the comprehensive preparation offered by the syllabus, covering various aspects of microbiology. Graduates may value the research exposure gained through dissertation projects, contributing to their preparedness for the workforce.

**From Employers:** Graduates are likely to possess practical skills relevant to the field due to the emphasis on practical courses and dissertation projects.

**Resolution No. 4:** Feedback was collected by the entire stakeholder & was incorporated in the syllabus.

The meeting was concluded with the permission of Hon. Chairman followed by vote thanks by Mr Dhawal Doshi.