

M C E Society's
Abeda Inamdar Senior college of Arts, Science and Commerce,
Pune-01(Autonomous)
NAAC reaccredited A grade
Faculty of Science

Board of Studies in Microbiology and Biotechnology

Sr.No	Name and Address of BOS members	Designation in BOS
1.	Dr Devipriya Majumder Associate Professor and Head. Dept of Microbiology, Abeda Inamdar Senior college	Chairman
2.	Dr Prashant K. Dhakephalkar Director and Scientist G, Bioenergy Agharkar Research Institute Maharashtra Association for Cultivation of Science G.G. Agarkar Road, Pune	VC nominee S.P.P.U
3.	Dr Shamim Shaikh Principal, Rajiv Gandhi Institute of IT & Biotechnology, Bharati Vidyapeeth (Deemed to be University)	Academic Council Nominee Subject Experts (Other than parent University)
4.	Dr. Neelu Nawani Professor and Incharge , Microbial Diversity Research Centre PhD Coordinator Dr. D. Y. Patil Biotechnology and Bioinformatics Institute Dr. D. Y. Patil Vidyapeeth, Tathawade, Pune	Academic Council Nominee Subject Experts (Other than parent University)
5.	Dr Sangeeta. Ahiwale Associate Professor Dept. of Microbiology. MP college. Pimpri	Subject Expert from Teaching field

6.	Dr Sangeeta Bhagat Associate Professor and Head, Dept of Biotechnology, Modern College, Shivajinagar	Subject Expert from Teaching field (Biotechnology)
7.	Mr Navnath R Nage Manager ,Production dept.,Serum Institute ltd, Manjari,Pune	Industry Expert
8.	Ms.Zamila Khatun Editorial Advisor, Nature Communications team, Springer nature technology and publishing solutions	Student Alumni
9.	Dr Snehal Kulkarni Associate Professor ,AISC	Member
10.	Prof Vaishali Prabhune Assistant Professor,AISC	Member
11.	Prof Gauri Devasthale Assistant Professor,AISC	Member
12.	Prof Nusarat S Shaikh Associate Professor,AISC	Member
13.	Prof Amrita Bhatia Assistant Professor,AISC	Member
14.	Dr Jaspal Kaur Oberoi Assistant Professor,AISC	Member
15.	Dr Madhavi Rane Assistant Professor,AISC	Member
16.	Prof Mansura Mulani Assistant Professor,AISC	Member

17.	Prof Shilpa Tambe Assistant Professor,AISC	Member
18.	Dr Arshiya Shaikh Assistant Professor,AISC	Member
19.	Neha Pai Assistant Professor,AISC	Member
20.	Dr Ishrat Shaikh Assistant Professor and Head,AISC	Member
21.	Dr Yusufi Mujahid Associate Professor,AISC	Member
22.	Dr Vijayalaxmi Shinde Assistant Professor & HOD,AISC	Member

Dr Devipriya Majumder

BOS, Chairman

Dr Shaila Bootwala

Principal

Department of Microbiology/Biotechnology

BOS Meeting, Friday, 04 June 2021

Minutes of the Meeting

A meeting to discuss the syllabus of FY BSc Microbiology, FYBSc Vocational Biotechnology and MSc Part I Microbiology with the BOS members was organized online on 4th June 2021. All members joined the meeting which started with the introduction of BOS members.

Prof. V.S. Prabhune welcomed everyone on behalf of Microbiology Dept.

Dr. D. R. Majumder, Head Department of Microbiology thanked all the BOS members to accept our invitation to be in the board. She requested the members to give inputs and suggestions for our newly designed syllabus.

The BOS members present were

- 1) Dr Prashant K. Dhakephalkar
- 2) Dr Shamim Shaikh
- 3) Dr. Neelu Nawani
- 4) Dr Sangeeta. Ahiwale
- 5) Dr Sangeeta Bhagat
- 6) Mr. Navnath R Nage

One of our alumni Ms. Zamila Khatun MSc Microbiology, who is currently serving as Editorial Advisor, Nature Communications team Springer nature technology and publishing solutions was also a part of the committee.

The other staff members of our College were

- 1) Dr. Ishrat Shaikh
- 2) Dr. Vijaylakshmi Shinde,
- 3) Dr. Yusufi Mujahid.

The following points were discussed

1) Syllabus discussion started with FY Microbiology, paper I of Sem I & II which included Amazing world of Microbiology and Applications in various fields along with the commercial and ecological importance, which was presented by Mrs. G. S. Devasthale. Paper II of Sem I & II was discussed by Mrs. V. S. Prabhune, which included techniques in Microbiology, Staining, Sterilization and Disinfection and Cultivation and Growth of Microorganisms.

2) Practicals of Sem I & II were discussed by Mrs. M. S. Mulani. In Sem I General Microbiology I, 14 practicals are included like biosafety level, GLP, Common glasswares and instruments used in the lab, biological waste disposal, Media preparation, checking sterilization efficiency. In Sem II, 14 practicals are there which include cultivation of photosynthetic bacteria, aerobic and anaerobic bacteria etc.

Quorum was then opened for discussion and suggestions.

3) Dr Shamim asked about the number of Credits per theory and practicals.

4) Dr. Sangeeta Ahiwale suggested to include logistic growth to be included in Paper II for comparison of pattern of growth.

5) Dr. PK. Dhakephalkar suggested to include Introduction to Confocal Microscopy, Spore and flagella staining and volume based sterilization with its kinetics. He also suggested to explain the requirement of repository and the difference between culture collection and repository to be included. In bacterial growth, metabolite production and enzyme production should be included and the concept of Consortium, pathogenicity, virulence and transmissibility should be explained.

6) Mr. Navnath Nage suggested that the students should be given idea of types of diseases, chemotherapy, vaccination, adjuvants antigens. In sterilization, he suggested to include types of filters, MOC, and the indicators used. In practicals his suggestion was to include pH meter, weighing balance and filtration assembly.

7) Dr. P.K. Dhakephalkar supported this suggestion and suggested to include the calibration of the instruments

8) Mr. Nage advised that cleaning of the glassware is a critical job and the technique of washing to be validated.

Mrs. Prabhune shared the program structure of Science.

9) Dr. Neelu Nawani suggested to cover Micrometry, culturing of phages and viruses.

10) Discussion of FY Vocational Biotechnology started with the presentation of Dr. Arshiya Shaikh about the core structure of Biotechnology.

She explained that Sem I and II are having 2 Papers and one Practical course.

11) Ms. Neha Pai presented Sem I Paper Biotechnology: Concept and Applications, Sem II paper Biostatistics and Computers for Biologists.

12) Dr. Shamim Shaikh was of the opinion that for vocational course the content in the syllabus was too much and no justice was given to the actual subject matter. She wanted to know the changes from the existing syllabus. She also suggested to include easy references of text books which are easily available and accessible for students.

13) Dr. P. K. Dhakephalkar advised to include entrepreneurships, opportunities for start ups for students and some business development programs. Also some genetic engineering tools should be included in the course. Introduction to biomolecules, micropipettes, 4 & 5 digit weighing balance, effect of environmental conditions, types, calibrations, calculations of uncertainty of measurement, error calculations, accuracy of measurements should be included.

14) Dr. Ahiwale advised to add biosafety measures in the course. Also some basic of eukaryotic cells should be added.

15) Dr. Sangeeta Bhagat advised to include introduction to drug discovery, machine learning and computational tools.

16) Dr. Ishrat Shaikh also suggested to reduce statistics from the syllabus and add more of biotechnological techniques.

17) Discussion on MSc I Syllabus started with structure. Mrs. S. P. Tambe explained the pattern of PG about compulsory and elective courses. She presented

the theory papers and elective papers. Sem II papers were discussed by Dr. M. D. Rane and Mrs. A. M. Bhatia.

The compulsory practical courses for SEM I & II were presented by Dr.J.K.Oberoi. .

18) Suggestions for PG: Dr P. K. Dhakephalkar advised to include bioinformatics analysis and genome analysis. He appreciated the framed syllabus and told to include the recent references. Dr Ahiwale and Dr. N. Nawani also advised to update the references.

At the end of the meeting, Prof. Nusarat Shaikh, proposed Vote of thanks by individually thanking each and every member of Board of Study and the faculties of the college.

Dr. D. R. Majumder

BOS , Chairman

To,

The Chairman,

BOS in Microbiology and Biotechnology,

Faculty of Science,

Abeda Inamdar Senior College of Arts, Science and Commerce (Autonomous),

Camp, Pune - 01.

Subject: Approval for Subject Titles and Syllabus of courses under BOS in Microbiology and Biotechnology.

Respected Madam,

I, Prashant K. Dhakephalkar, approve the titles and the syllabus of courses under BOS in Microbiology and Biotechnology as listed below.

The approved titles and syllabi are as follows:

Sr no.	Program	Sem	Course Code	Course title
1.	B.Sc.	I	21SBMB111	Amazing World of Microbiology
2.	B.Sc.	I	21SBMB112	Techniques in Microbiology
3.	B.Sc.	I	21SBMB113	Practical: General Microbiology-I
4.	B.Sc.	II	21SBMB121	Bacteriology
5.	B.Sc.	II	21SBMB122	Cultivation and Growth of Microorganisms
6.	B.Sc.	II	21SBMB123	Practical: General Microbiology-II
7.	B.Sc.	I	21SBBT111	Basics of Biochemistry
8.	B.Sc.	I	21SBBT112	Introduction to fields of Biotechnology
9.	B.Sc.	I	21SBBT113	Lab Course I: Practical in Biochemistry
10.	B.Sc.	II	21SBBT121	Biophysical techniques
11.	B.Sc.	II	21SBBT122	Applications of Statistics & Computer in biology
12.	B.Sc.	II	21SBBT123	Lab Course II: Practical in Bioinstrumentation, Biostatistics & Computers.

13.	M.Sc.	I	21SMMB111	Microbial Systematics
14.	M.Sc.	I	21SMMB112	Quantitative Biology
15.	M.Sc.	I	21SMMB113	Biochemistry, Enzymology & Cell Biology
16.	M.Sc.	I	21SMMB114A	Fungal Systematics and Extremophiles
17.	M.Sc.	I	21SMMB116A	Practicals Based on Fungal Systematics and Extremophiles
18.	M.Sc.	I	21SMMB114B	Experimental Design and Quantitative approaches for Biologists
19.	M.Sc.	I	21SMMB116B	Practicals based on Experimental Design and Quantitative approaches for Biologists
20.	M.Sc.	I	21SMMB114C	Protein chemistry and membrane transport
21.	M.Sc.	I	21SMMB116C	Practicals Based on Protein chemistry and membrane transport
22.	M.Sc.	I	21SMMB115	Biochemical Techniques (Practicals based on compulsory theory credits)
23.	M.Sc.	II	21SMMB121	Instrumentation and Molecular Biophysics
24.	M.Sc.	II	21SMMB122	Molecular Biology I
25.	M.Sc.	II	21SMMB123	Biomolecules and Clinical Biochemistry
26.	M.Sc.	II	21SMMB124A	Bioinformatics and Bio-nanotechnology
27.	M.Sc.	II	21SMMB126A	Practicals based on Bioinformatics and Bio-nanotechnology
28.	M.Sc.	II	21SMMB124B	Molecular Biology tools and applications
29.	M.Sc.	II	21SMMB126B	Practicals based on Molecular Biology tools and applications
30.	M.Sc.	II	21SMMB124C	Respiration and Photosynthesis
31.	M.Sc.	II	21SMMB126C	Practicals based on respiration and Photosynthesis
32.	M.Sc.	II	21SMMB125	Molecular biology, metabolism and instrumentation Techniques (Practicals based on compulsory theory credits)

With warm regards,

Name and Signature :

Prashant K. Dhakephalkar