

SOPHIA COLLEGE (AUTONOMOUS)

MINUTES OF THE SUBJECT BOARD MEETING OF MICROBIOLOGY HELD ON 19TH SEPTEMBER 2018. Place: Sophia College, Computer Laboratory 2

Time: 2.00 p.m. onwards.

Board of Studies (composition):

Sr no.	Name	Designation
1.	Ms. Miriam Stewart	Vice Chancellor's nominee
2.	Dr. (Ms) Jyoti Kode	Expert from non-parent University (ACTREC)
3.	Dr. (Ms) Annamma Odaneth	Expert from non-parent University (ICT Matunga)
4.	Mr. Sivan K	Industry expert – Granted leave of absence
5.	Ms. Nidhi Tomar	Meritorious alumni

Staff Members -

Sr. No.	Name	Designation
1.	Dr. (Ms) Arjumanara Surti	Head, Department of Microbiology Associate Professor, Chairperson
2.	Dr. (Ms) Gianni E. Mapara	Associate Professor
3.	Ms. Suparna Dugal	Assistant Professor (on Medical Leave)
4.	Dr. (Ms) Rajbinder Kaur Dehiya	Assistant Professor
5.	Ms. Shraddha Prabhu	Assistant Professor
6.	Ms. Jyoti Mantri	Associate Professor
7.	Mr. Vijay Vig	Assistant Professor

Agenda No.1

Introduction of members of BOS, Microbiology

Dr. (Ms.) Arjumanara Surti, head of the department of Microbiology, welcomed all the respected members of the BOS and introduced them to the departmental members present. Members of the department were introduced to the respected members of the BOS.

Agenda No.2

Opening remarks by the Head of the department included-

A brief history of Sophia College was given to the members, viz the completion of platinum jubilee of the college and Golden jubilee of the department in the recent past.

Sophia's step towards Academic autonomy were due to the following reasons-

1. A very high NAAC grade in three consecutive cycles.
2. Delay in declaration of results and erratic examination schedules by the University.
3. Allows control over admission schedules /process.
4. The syllabus laid down by the University is not in compliance with the needs of our girl/ lady students. In addition, autonomy would allow the college to design syllabi and courses to cater to the needs of underprivileged students many of whom are first generation learners and also to provide an opportunity for girl students to have more scope / access to higher studies.

Agenda No.3

Discussion of FY syllabus

The discussion was initiated by reading out of the feedback on the FYBSc syllabus communicated by email to Dr. Surti by Dr. Annamma Odaneth. The points featuring in the feedback were discussed as follows-

1. Dr. Annamma Odaneth suggested that certain topics could be introduced briefly at FYBSc level and continued at SYBSc and TYBSc levels. Dr. Odaneth suggested that topics of bioremediation and waste management should be included in the FYBSc syllabus. Dr. Surti responded by stating that these topics have been introduced in the SYBSc syllabus. Dr. Surti also mentioned that the undergraduate curriculum is quite vast, and therefore the foundations of the subject is laid down in FYBSc, applied fields of the subject are covered in SYBSc and TYBSc syllabus includes various other fields of Microbiology.
2. Ms. Miriam Stewart suggested that scope and applications of Microbiology be included in the FYBSc syllabus. Dr. Surti agreed to this and said that these were a part of FYBSc Semester II Paper 2, Unit III under the heading of Microbial bioprocess technology. However Dr. Odaneth suggested that this unit could be changed and four Fs (Food, Feed, Fuels and Functional molecules) could be introduced to give the students an idea about the scope and applications of Microbiology. In addition to this, health and medical microbiology should also be touched upon. She felt that the entire spectrum of applications should be taught to the students at FY level itself.
3. She offered to provide titles of reference books for this unit as she felt that text books cannot keep pace with the advances in the field. She also felt that a lot more can be done as compared to whatever is existing. Dr. Jyoti Kode added that contributions of Scientists who had made significant contributions in the subject should be included. Dr. Surti informed that it was already being done.
4. Dr. Annamma Odaneth suggested to that a latest topic like introduce Synthetic biology be introduced in the syllabus. Dr Surti mentioned that this has already being initiated. A workshop in this direction was held on 7th September 2018 and some staff members of

Science faculty attended the same. It was mentioned that the initial proposal for this initiative was offered by Dr. Shamlan Reshamwala, DBT- ICT, Mumbai. A few experiments were being planned in this direction for the TYBSc students by the staff who had attended the workshop.

5. Ms. Stewart suggested that the number of lectures allocated to a few topics including carbohydrates and nucleic acids in FYBSc were inadequate. Dr. Surti justified that these topics would be covered in detail at SYBSc level in the form of an overview so that the students are well versed with these topics before they are taught metabolism and topics in genetics..
6. Ms. Stewart suggested that more lectures need to be allocated to the topic of compound microscopy as a lot many details have to be covered under the topic. Ms. Stewart suggested that the five lectures allocated to teach staining techniques could be directed to teaching more details on compound microscopy and special staining could be covered during practicals only. **Dr. Surti and Ms. Prabhu agreed and said that reallocation of lectures would be done.** Ms. Stewart also expressed her concern on the vastness of practical syllabus for Semester I and whether it would be possible to complete the same. Dr. Surti assured that the departmental staff does the planning and execution of practicals keeping the time factor in mind and is able to complete the syllabus within the limits of the time allotted.
7. Dr. Odaneth suggested that the concept of chemical/ mass balance in terms of substrate to biomass conversion should be introduced to at the FYBSc level. Dr. Surti agreed to include these as these were relevant and interesting concepts. Ms. Prabhu requested for a protocol for the same. Dr. Odaneth offered to forward the same or suggest a reference book.
8. Dr. Odaneth informed that at ICT, a two-hour lecture is split into one-hour lecture by staff, half an hour of presentation by students followed by another half an hour of discussion on the relevant topic. She mentioned a similar policy could be adopted in order to get students actively involved in the class. Dr. Kode also added that teaching should be more interactive.
9. Ms. Nidhi suggested that in order to bridge the gap between academics and job requirements by the industry, students should be asked to find recent research papers and have a discussion in the class; the focus being more on applications [for eg: introduce them to the NCCLS guidelines, various pharmacopeia norms, FSSAI regulations, regulatory bodies, patents, IPR etc]. Ms. Prabhu and Ms Mantri informed that these were already the part of the existing curriculum.
10. Dr. Odaneth suggested that students should know the concept of aeration, agitation and scale up. Mr Vijay mentioned that these topics were a part of the TYBSc syllabus.

11. Dr. Surti informed that in order to generate an interest in the topic of history of microbiology, she and Ms Prabhu were planning a poster presentations by students on the life and work of prominent scientists in the field of Microbiology. She also proposed to invite professionals from industry and Scientists as guest lecturers for some topics in order to make teaching learning more effective.
12. All members of BOS were informed that 75:25 (SEE: IA) pattern of examinations will be used for all classes.
13. List of papers setters and examiners was perused.

Resolution

1. Dr. Surti agreed to reframe lecture allocation for paper II, i. e. more lectures for microscopy and less for special staining and to take up the latter during the practicals.
2. Dr. Surti agreed to reframing of FYBSc Sem II paper 2 Unit III syllabus and the 4 F's will be included.

Syllabus for the FYBSc, Semester I and II was passed by the BOS including IA format and Examination pattern. The syllabus is being implemented from academic year 2018-19.

Agenda No.4

Discussion of SY syllabus

1. Mr. Sivan (communicated by email) suggested that automated methods of identification of microorganisms should be included in taxonomy.
2. Dr. Odaneth suggested that concept of metagenomics be included in taxonomy or instrumentation. She also said that soil metagenomes are available online and they can be coupled with bioinformatics. Ms. Mantri and Dr Dehiya said that bioinformatics practicals are done at TYBSc level. Dr. Dehiya informed that environmental metagenomics is being introduced as a topic in paper 2
3. Dr. Odaneth suggested that ultrafiltration be included in protein purification methods. Mr. Vijay said that they do the same in downstream processing at TYBSc level.
4. Dr. Kode suggested Ames test could be included in the syllabus. Dr. Dehiya informed that as per her knowledge the strains used for the testing are under strict copyright and therefore not shared and that they are expensive and beyond the reach of educational institutes. To this Dr. Kode suggested that MOUs could be signed and resources could be shared with reputed Institutes including ACTREC.
5. Dr. Odaneth added that under the topic of Biochemical pathways in Paper 3, integration of all pathways to give a global picture of metabolism in *E. coli* for example using bioinformatics tools such as the KEGG database could be considered.

6. Ms. Nidhi enquired about infectious disease covered at SYBSc level. Ms. Mantri mentioned that innate immunity, clinical microbiology and epidemiology will be covered in SYBSc and details of infectious diseases will be covered in TYBSc.
7. Dr. Odaneth informed that online videos on concepts involved in microbial growth kinetics are available on the internet. These videos feature simple modifications in growth parameters such as aeration, and how the diameter/ width of the culture vessel influences the quantity of culture density. She offered to share the link, as she felt such information covered by the videos is very easily followed by the students. Dr. Surti informed that a practical to this effect was being performed at FYBSc level, viz effect of static and shaker conditions however she liked the idea and said that it will be incorporated.
8. Dr. Odaneth suggested an activity to ask students to take products such as Yakult, Yoghurt etc and identify whether it has live bacteria or dead could be conducted. She mentioned that Lactic acid estimation protocols were available on the internet.

Syllabus for the SYBSc, Semester III and IV was passed by the BOS, including IA format and Examination pattern, but would be implemented starting next academic year.

Agenda No.5

Discussion on syllabus of TYBSc, M. Sc part I and II syllabus – Dr. Odaneth mentioned that changing syllabi for all three classes at one time is a rapid change with the scope of missing out on crucial topics and therefore, changes should be made gradually. The existing syllabus of University of Mumbai for these classes was passed as the syllabus of Sophia College (Autonomous) by the BOS. Dr. Surti mentioned that the modified/ changed syllabus for the said classes will be presented at the next BOS meeting tentatively scheduled for February 2019.

Resolution:

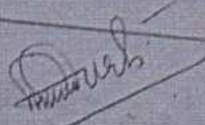
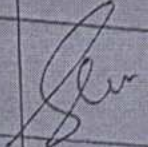

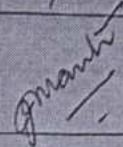
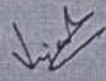
1. Syllabus for the TYBSc, M.Sc part I and II -seen and passed by the BOS, including IA format and Examination pattern.

Meeting ended with a vote of thanks by Dr. Surti to all the BOS members.

Minutes prepared by: Dr. Rajbinder Kaur Dehiya and Mr. Vijay Vig

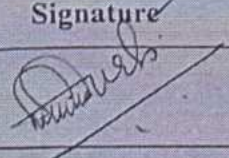
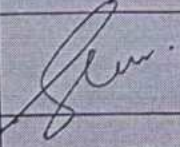

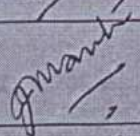
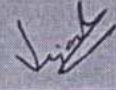
Edited and Approved by: Dr (Ms) Arjumanara M Surti

Attendance Record of meeting of the members of the Microbiology Board of Studies of Sophia College (Autonomous) held on Wednesday, 19th September, 2018 at 2:00 pm in Computer Laboratory 2.

Name	Designation	Signature
Dr. Arjumanara Surti	Chairperson, Board of Studies	
Mrs. Miriam Stewart	The Vice-Chancellor's Nominee	MStewart
Dr. Gianni E. Mapara	Teacher of the department	
Ms. Suparna Dugal	Teacher of the department	On Medical leave
Dr. Rajbinder Dehiya	Teacher of the department	Rajbinderkaur
Ms. Shraddha Prabhu	Teacher of the department	
Mrs Jyoti Mantri	Teacher of the department	
Mr Vijay Vig	Teacher of the department	
Dr. Jyoti Kode	Subject Expert (outside the Parent University)	JyotiKode
Dr. Annamma Anil Odaneth	Subject Expert (outside the Parent University)	Annamma
Sivan K	Representative from Industry	Granted leave of absence
Nidhi Tomar	Post-graduate alumna	

RESOLUTION

“The Subject Board in MICROBIOLOGY for Sophia College (Autonomous), hereby approve the syllabus of Semester 1 to Semester 6 for Microbiology course, which is being implemented from the Academic Year 2018-19 at the meeting held on 19th September, 2018”.

Name	Designation	Signature
Dr. Arjumanara Surti	Chairperson, Board of Studies	
Mrs. Miriam Stewart	The Vice-Chancellor's Nominee	M Stewart
Dr. Gianni E. Mapara	Teacher of the department	
Ms. Suparna Dugal	Teacher of the department	On Medical leave
Dr. Rajbinder Dehiya	Teacher of the department	Rajbinder Kaur
Ms. Shraddha Prabhu	Teacher of the department	
Mrs Jyoti Mantri	Teacher of the department	
Mr Vijay Vig	Teacher of the department	
Dr. Jyoti Kode	Subject Expert (outside the Parent University)	Jyoti Kode
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