

MICROBIOLOGY Departmental Report (2018-2019)

I. Department profile

Names	Designation
Dr. Arjumanara Surti	Associate Professor, Head of Department
Dr. Gianni Erevelles Mapara	Associate Professor
Ms Suparna Dugal	Associate Professor
Dr. Rajbinder Kaur Dehiya	Associate Professor
Ms. Shraddha Prabhu	Assistant Professor
Ms Jyoti Mantri	Associate Professor
Mr. Vijay Vig	Assistant Professor

II. Courses taught

UNDERGRADUATE:

SEMESTER I

Course code	Title	Credits
SBSMCB101	FUNDAMENTALS OF MICROBIOLOGY	2
SBSMCB102	BASIC TECHNIQUES IN MICROBIOLOGY	2
SBSMCBP1	PRACTICALS	2

SEMESTER II

Course code	Title	Credits
SBSMCB201	EXPLORING MICROBIOLOGY	2
SBSMCB202	ADVANCED AND APPLIED MICROBIOLOGY	2
SBSMCBP2	PRACTICALS	2

SEMESTER III

Course Code	Title	Credits
SBSMCB301	BIOMOLECULES AND MICROBIAL TAXONOMY	2
SBSMCB302	ENVIRONMENTAL MICROBIOLOGY	2
SBSMCB303	INTRODUCTION TO CLINICAL MICROBIOLOGY	2
SBSMCBP3	PRACTICALS	3

SEMESTER IV

Course Code	Title	Credits
SBSMCB401	METABOLISM & BASIC ANALYTICAL TECHNIQUES	2
SBSMCB402	APPLIED MICROBIOLOGY	2
SBSMCB403	ADVANCES & APPLICATIONS OF MICROBIOLOGY AND SOFT SKILLS	2
SBSMCBP4	PRACTICALS	3

SEMESTER V

Course code	Title	Credits
SBSMCB501	MICROBIAL GENETICS	2.5
SBSMCB502	MEDICAL MICROBIOLOGY AND IMMUNOLOGY: PART-I	2.5
SBSMCB503	MICROBIAL BIOCHEMISTRY: PART-I	2.5
SBSMCB504	BIOPROCESS TECHNOLOGY: PART-I	2.5
SBSMCBP5	PRACTICALS	06

Course code	Title	Credits
SBSAPC503	FOOD PRODUCTION AND PROCESSING (General Principles)	2
SBSAPCP503	PRACTICALS	2

SEMESTER VI

Course code	Title	Credits
SBSMCB601	rDNA TECHNOLOGY, BIOINFORMATICS & VIROLOGY	2.5
SBSMCB602	MEDICAL MICROBIOLOGY AND IMMUNOLOGY: PART-II	2.5
SBSMCB603	MICROBIAL BIOCHEMISTRY: PART-II	2.5
SBSMCB604	BIOPROCESS TECHNOLOGY: PART II	2.5
SBSMCBP6	PRACTICALS	6

Course code	Title	Credits
SBSAP C603	FOOD PRODUCTION AND PROCESSING (APPLICATIONS AND Q.A)	2
SBSAP CP603	PRACTICALS	2

POST GRADUATE:**SEMESTER I**

Course code	Title	Credits
SMSMCB101	CELL BIOLOGY AND VIROLOGY	4
SMSMCB102	MICROBIAL GENETICS	4
SMSMCB103	MICROBIAL BIOCHEMISTRY	4
SMSMCB104	MEDICAL MICROBIOLOGY & IMMUNOLOGY	4
	PRACTICALS	
SMSMCBP101	CELL BIOLOGY AND VIROLOGY	2
SMSMCBP102	MICROBIAL GENETICS	2
SMSMCBP103	MICROBIAL BIOCHEMISTRY	2
SMSMCBP104	MEDICAL MICROBIOLOGY & IMMUNOLOGY	2

SEMESTER II

Course code	Title	Credits
SMSMCB201	CELL BIOLOGY AND VIROLOGY	4
SMSMCB202	MICROBIAL GENETICS	4
SMSMCB203	MICROBIAL BIOCHEMISTRY	4
SMSMCB204	MEDICAL MICROBIOLOGY & IMMUNOLOGY	4
	PRACTICALS	
SMSMCBP201	CELL BIOLOGY AND VIROLOGY	2
SMSMCBP202	MICROBIAL GENETICS	2
SMSMCBP203	MICROBIAL BIOCHEMISTRY	2
SMSMCBP204	MEDICAL MICROBIOLOGY & IMMUNOLOGY	2

SEMESTER III

Course code	Title	Credits
SMSMCB301	TOOLS AND TECHNIQUES: RESEARCH METHODOLOGY	4
SMSMCB302	FOOD MICROBIOLOGY	4
SMSMCB303	ADVANCES IN BIOTECHNOLOGY	4
SMSMCB304	APPLIED AND ENVIRONMENTAL MICROBIOLOGY	4
	PRACTICALS	
SMSMCBP301	LITERATURE SURVEY AND RESEARCH PROJECT PROPOSAL	2
SMSMCBP302	FOOD MICROBIOLOGY	2
SMSMCBP303	ADVANCES IN BIOTECHNOLOGY	2
SMSMCBP304	APPLIED AND ENVIRONMENTAL MICROBIOLOGY	2

SEMESTER IV

Course code	Title	Credits
SMSMCB401	TOOLS AND TECHNIQUES: BIOMOLECULAR ANALYSIS	4
SMSMCB402	PHARMACEUTICAL MICROBIOLOGY	4
SMSMCB403	ADVANCES IN BIOTECHNOLOGY	4
SMSMCB404	APPLIED AND ENVIRONMENTAL MONITORING & MANAGEMENT	4
	PRACTICALS	
SMSMCBP401	DISSERTATION BASED ON RESEARCH PROJECT AND POSTER PRESENTATION	2
SMSMCBP402	PHARMACEUTICAL MICROBIOLOGY	2
SMSMCBP403	ADVANCES IN BIOTECHNOLOGY	2
SMSMCBP404	APPLIED AND ENVIRONMENTAL MONITORING & MANAGEMENT	2

III. BOS composition

Dr. Arjumanara Surti - Chairperson, Board of Studies

Ms Miriam Stewart - Vice-Chancellor's nominee

Dr. Jyoti Kode - Subject expert from outside the Parent University (ACTREC)

Dr. Annamma Odaneth - Subject expert from outside the Parent University (ICT Matunga)

Mr. Sivan K. - Representative from industry

Ms Nidhi Tomar- Postgraduate alumnus

- Other Members of Faculty

Dr. Gainni E. Mapara

Ms Suparna Dugal

Dr. Rajbinder Kaur Dehiya

Ms Shraddha Prabhu

Ms Jyoti Mantri

Mr. Vijay Vig

IV. Dates of BOS meetings - 19th September 2018 & 23rd March 2019

V. Activities Conducted by the department:

1. Poster Competition titled - Is your life too Plastic?

Date - 13th July 2018

Number of students involved - All UG students

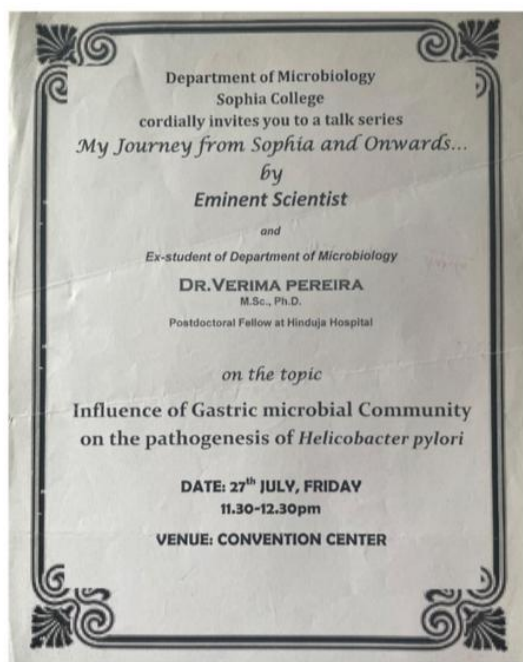


2. Seminar on Influence of Gastric microbial community on the pathogenesis of *Helicobacter pylori*

Speaker – Dr. Verima Pereira

Date - 27th July 2018

Number of students involved - 129



3. Field trip to Common Effluent Treatment Plant (CETP), Kopar Khairane, Navi Mumbai
Date - 28th August 2018
Number of students involved - 53




VI. Special pedagogical tools used, other than the lecture method

1. Use of multimedia like PPTs, Canva
2. Youtube Videos and Animations
3. Virtual labs
4. Seminar presentation by students
5. Creation of infographics
6. Quizzes, Crosswords
7. Flipped Classroom
8. Role play
9. Survey based assignments /
10. Literature reviews
11. Models /Exhibitions / Poster presentations
12. Online quizzes

VII. Department/ lecturers having research projects funded by Government (include RUSA), Non-Government agencies, college during the year.

Minor research grant from University of Mumbai for the ongoing project titled, “Preparation of low cost indigenous amperometric whole cell based biosensor”.

University of Mumbai



Research Project No: 89

NAME OF THE RESEARCHER	: Dr. Rajblender Kaur Dahiya
LECTURE IN	: Microbiology
AMOUNT SANCTIONED	: Rs. 75,000/-

Ref No. APD/237/323of 2018
27th March, 2018

To,
The Principal,
Sophia College for Women
Department of Microbiology, Bhulabhai Desai Road,
Mumbai- 400 026.

Sub: - Minor Research Grant Project.

Sir/Madam,

I am directed to inform you that the said proposal has been considered by the University and the research grant as quoted above is sanctioned to the researcher.

The sanctioned amount will be disbursed in two installments. The first installment of 40% of the sanctioned amount will be disbursed within the month of March. The remaining 60% amount will be disbursed up to 31st August, 2018.


The researcher is expected to spend 60% amount initially from his/her own resources to carry out the work.

Further, I am to inform you that the researcher will have to utilize the 40% sanctioned amount on or before 31st March, 2018 and submit original bills/vouchers of the expenditure alongwith Utilization Certificate duly certified by the Principal/ Director/ Head/Institute/University Department of the College to the Accounts Section of University.

Please note that 60% balance amount out of sanctioned grant will be released after presentation of your proposal & final approval of the committee. You need to submit utilization certificate after presentation of your research and final approval of 60% grant including bills/vouchers/receipts in original through University Accounts Section.

The report of the research work carried out by the concerned researcher will have to be submitted to the University on or before 31st August 2018.

The Principal/Head of the Institute are requested to inform the researcher accordingly and arrange to forward his/her undertaking immediately to enable this office to release first installment of the research grant.

Yours faithfully,

Assistant Registrar
(Academic Planning & Development)

VIII. Workshop on Experimental approach for drug studies sponsored Lady Tata Memorial Trust

Conducted jointly by the Departments of Microbiology, Biochemistry and Life Sciences)

Date: 17th– 19th January 2019

Speakers: Dr. Krishna Ramalingam Iyer, Dr. Vandana Patravale, Dr. Champakali Ayyub & Dr. Aurnab Ghose

ORGANISING COMMITTEE

- Dr. (Ms.) Arivaraman M. Sankar (Coordinator)
Head, Dept. Of Microbiology
- Dr. Yashwanth Khairi Vice Principal
- Dr. Hema Ramakrishnan
Head, Dept. Of Life Sciences
- Dr. Chinnappa Vaman
Head, Dept. Of Biochemistry

WHO CAN ATTEND

REGISTRATION
Fee: ₹ 500
Last Date: 31st Dec. 2018
Participants are requested to send the duly filled registration form before 5th January, 2019

Payment through Cash/Bank Transfer (IMPS/NEFT/RTGS)/personal cheque (in favor of _____) will be accepted. Cheque and e-Transfer reference number must be mentioned in the registration form.
Bank of _____ Branch A/C: _____
IFSC: _____ (MISCR)

Contact:
Phone: _____
Fax: _____
E-mail: _____

SOPHIA COLLEGE FOR WOMEN
AFFILIATED TO THE UNIVERSITY OF MUMBAI

NAAC RE-ACCREDITED 'A' GRADE WITH CGPA 3.70 ON A SCALE OF 4 (2015)

Address
Sophia College
Bhulabhai Desai road,
Mumbai -400026

Location: Sophia College Campus can be accessed easily from both Bhulabhai Desai Road and Pookher Road. Sophia College Lane branches off from Bhulabhai Desai Road in front of Breach Candy Hospital near the Raymond showrooms and it leads straight up to the main gates of the campus. Access from Pookher Road is from the road that skirts building Apartments.

Local Public Transport
Green Road (Western Railway) is the nearest station. Bus route 135 connects the station to the college via Pookher Road. Seven of bus routes on Bhulabhai Desai Road (37, 39, 43, 45, 133, 134) and on Pookher Road (26, 32, 33, 37, 63, 64 Ltd, 66, 68, 97)

022-2551 2042 / 022-2552 3304 (Between 8 a.m. and 5 p.m.)
Fax: 022-2551 3183
sophiacollege@gmail.com

EXPERIMENTAL APPROACHES FOR DRUG STUDIES

Lectures and Hands on session on

- Drug development and testing
- Model systems in drug screening and toxicity studies
- In-vitro chemotherapeutic drug screening

Sophia College (Autonomous) Mumbai

17th - 19th January 2019

Time : 9 am to 4pm

REPORT

Twenty college graduate and / postgraduate teachers from Mumbai and other parts of Maharashtra (Jalgaon, Solapur and Kolhapur) participated in the workshop.

On the first day (17.01.19) the workshop started with a talk on “An overview of drug studies” by Dr. Sasikumar Menon, Director, Institute of Advanced Training and Research in Interdisciplinary Sciences (Therapeutic Drug Monitoring Laboratory) followed by a talk on “Drug discovery and development: Role of model systems” by Dr. Krishna Ramalingam Iyer, Professor, Pharmaceutical Chemistry, Bombay College of Pharmacy and “Thermostable nanosized system” by Mr Prashant instead of Dr. Vandana Patravale, Professor of Pharmaceutical Science & Technology, Institute of Chemical Technology who could not make it to the workshop. This was followed by a hands-on session “Thermostable nanosized systems: Drug delivery applications”.

On the second day (18.01.19) a talk on ‘Basic principles of xenobiotic metabolism: The cytochrome P450 was delivered by Dr. Krishna Ramalingam Iyer, Professor, Pharmaceutical Chemistry, Bombay College of Pharmacy. He also conducted a hands-on session on “Isolation of cytochrome P450 rich microsomal fraction and its difference spectral measurement”. A talk and hands on session on “Zebrafish as a vertebrate model system in drug screening and toxicity testing” was conducted by Dr. Aurnab Ghose, Associate Professor, IISER in the afternoon of the same day.

On the last day of the workshop a talk on “Use of Drosophila as a model system to test drug toxicity” was delivered by Dr. Champakali Ayyub, Ex- Tata Institute For Fundamental Research followed by a hands-on session on the same conducted by Dr. Hema Subramaniam of the department of Life Science of Sophia college. The last hands on session was conducted by Mr. Lalit Rajan Samant, Jr. Research Officer Molecular Genetics Research Lab, B. J. Wadia

Hospital for children on “In-silico chemoinformatics- drugs prescreening”.

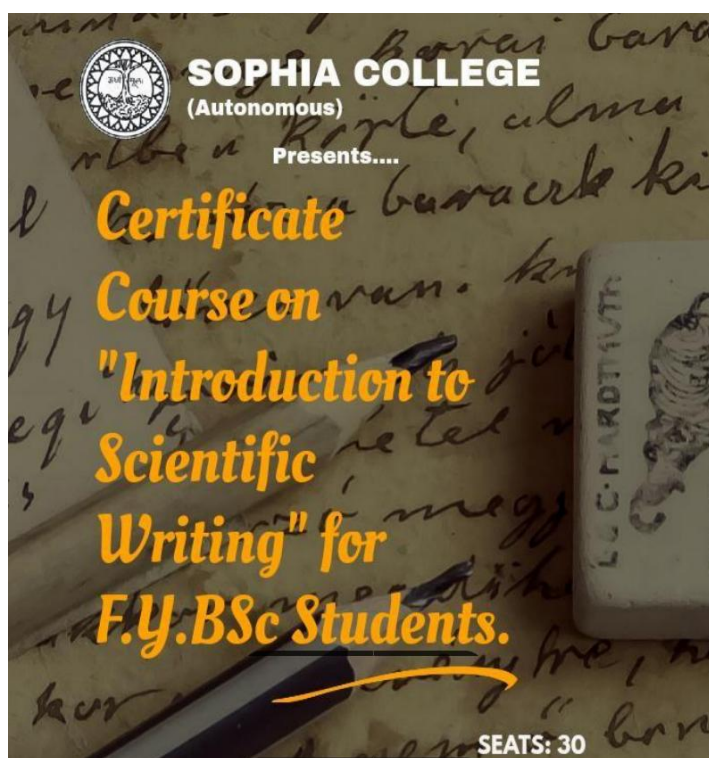
The participants appreciated the fact that all sessions were organized in such a manner that lectures were followed by hands-on sessions. We thank the LTMT for sponsoring the workshop and look forward to many more fruitful interactions.



IX. One credit Certificate Course on Introduction to Scientific Writing for FYBSc students (in collaboration with Department of Life Sciences)



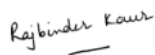


Date - 12th January to 20th April 2019

Number of students involved - 13



Sophia College (Autonomous)
One Credit Certificate Course on Introduction to Scientific writing
January – April 2019
“Introduction to Scientific writing” for FYBSc students
Resource persons and topics

1. Dr. Tina Chakravarty – Introduction to basics of Communication and Writing a Book Review (Assignment- Writing a book review)
2. Dr. Radhika Tendulkar - General norms of academic writing, How to carry out literature search and Why and how to avoid plagiarism (Assignment – paraphrasing exercises)
3. Dr. Bhaskar Saha - Types of scientific literature, Primary and secondary literature.
4. Dr. Andrea Coutinho- Nonverbal communication and Making a Powerpoint presentation (Assignment)
5. Dr. Medha S. Rajadhyaksha - General Ethics and Types of Plagiarism
6. Ms. Nabila Sorathia – How to run a plagiarism scan
7. Ms. Prabha Suresh - Library tour to understand indexing methods
8. Dr. Deepak Modi - Writing a Research Paper (part II)
9. Dr. Bhavana Daswani – Writing a Research paper (part 1) and Writing a report
10. Ms. Katie Bagli - Creative writing and Writing for Spectrum (Assignment- creative article writing)
11. Dr. Fatema Bhinderwala - Creating a poster for a conference (Assignment- poster making)
12. Dr. Hema Ramachandran and Dr. Rajbinder kaur Dehiya - Literature survey (Assignment – literature survey report)

	<p>SOPHIA COLLEGE (AUTONOMOUS) Bhulabhai Desai Road, Mumbai NAAC Reaccredited with Grade A (2015)</p> <p>CERTIFICATE OF PARTICIPATION</p> <p>This is to certify that</p> <p>Ms. <u>Tulip Pereira</u> (Roll No. S18072)</p> <p>has successfully completed a One-Credit Certificate Course on</p> <p>Introduction to Scientific Writing</p> <p>during the academic year 2018-2019.</p>		
 Dr Hemalatha Ramachandran Course Convenor Dept. of Life Science	 Dr Rajbinder Kaur Dehiya Course Convenor Dept. of Microbiology	 Dr Lata Pujari Coordinator Sophia Women's Centre	 Dr Ananda Amritmahal Principal Sophia College

X. Extension activities carried out in the neighborhood sensitizing students to social issues for

their holistic development

1. Slogan writing competition, Short film screening, Exhibition of Innovative Ideas on theme of Break free from plastics

Date - 2 July 2019 & 13 July 2019

Number of students involved - All UG students



Break free

From Plastics

PLASTIC FREE JULY

Slogan Writing Competition}
Venue: Science Building Corridor (Ground floor)
On 13th July 2018

Short film screening
[on 2nd July 2018 Venue: AV Hall]



12 Cheap _ Easy Tips for Reducing Your Waste - Sustainable Zero Waste Hacks



38 Ideas with Plastic Bottles



A new island the size of Mexico was discovered made out of plastic 2017



A Plastic Ocean 2016 HD Subtitles English _ Spanish



A Plastic Ocean Official Trailer



A Spoon You Can Eat is a Tasty Alternative to Plastic Waste _ Short Film Showcase



I Choose To



Exhibition of Innovative Ideas
Venue: Undergraduate Microbiology Lab,
Science Building
On 13th July 2018
Organized by the
DEPARTMENT OF
MICROBIOLOGY

2. Vaccination awareness campaign (Poster exhibition)

Date - January 2019

Number of students involved - 100



XI. Guidance and career counselling offered to students.

Talk on Career options in Medical Laboratory Technology

Speaker – Ruzbeh Mowdawal (Coordinator DCA, Sophia College) and Prina Shah

Date - 26th August 2019.

Number of students involved - 100