

## **Departmental Profile**

### **MICROBIOLOGY**

#### **1. Scope and Importance of department-**

Scope: The Microbiology department encompasses the study of all microscopic living organisms, including bacteria, viruses, fungi, protozoa, and algae. This field of study is essential to understanding the natural world and the human body, as well as to developing new technologies and treatments for diseases.

Importance: Microbiology is a vital field of study with a wide range of applications. Some of the most important areas of microbiology include:

- a. Medical microbiology: The study of microorganisms that cause disease, and the development of new diagnostic tests and treatments.
- b. Environmental microbiology: The study of microorganisms in the environment, and their role in nutrient cycling, food spoilage, and water pollution.
- c. Industrial microbiology: The use of microorganisms to produce food, beverages, pharmaceuticals, and other products.
- d. Biotechnology: The use of microorganisms to improve crops, develop new vaccines, and produce renewable energy.

The Microbiology department offers a variety of courses that cover the different aspects of this field of study. Students in the department have the opportunity to learn from well qualified staff and gain hands-on experience in the laboratory.

The Microbiology department is a valuable asset to the college and university. It is a place where students can learn, grow, and make a difference in the world.

#### **Introduction of Department-**

**Department was established in the year 2005 with the commencement of B. Sc. (Microbiology). Master's degree was started in 2007.** The department has highly qualified and experienced teaching staff who strive hard to impart quality education to the students. Department also has well equipped laboratories with latest equipment/instruments.

#### **Year of establishment:**

- Undergraduate courses- June 2005.
- Post-graduate courses- June 2007.
- Certificate Course In Microbiological Laboratory Techniques- June 2007.

1. Details of Programmes / Courses offered  
 UG / PG/ PhD / Certificate Course / Diploma course) ( Academic Year 2022-23)

Name of Programme	Duration	Entry Qualification	Medium of Instruction
Under Graduate	3 Years	H.S.C. Science	English
Post Graduate	2 Years	B.Sc Microbiology	English
Certificate Course	1 Year	H.S.C. Science	English

2. Program pattern ( Semester / annual/ CBCS)

Sr.No.	Name of Course	Remark
1.	Under Graduate	Semester (CGPA)
2.	Post Graduate	Semester (CGPA)
3.	Certificate Course	Annual (CGPA)

3. Number of teaching and non teaching staff

1)Teaching Staff :-06  
 2)Non Teaching Staff :-02

4. Number of Teaching in the department

Designation	Sanction	Filled
Professor	00	00

Associate Professor	00	00
Assistant Professor	06	06

5. Faculty profile with name, qualification, designation, specialization, (Ph.D. / M. Phil. Etc.,)

6.

Sr. No.	Name of faculty	Qualification	Designation	Specialization	Number of years of teaching experience (Year and months)
1	Dr. Swapnil Satish Joshi	M.Sc. CSIR NET, Ph.D.	Head, Asst. Professor	MB	13
2	Mrs. Mariya Yusuf Husain	M.Sc. SET	Asst. Professor	MB	10
3	Miss. Dhanvarsha Dilip Joshi	M.Sc.	Asst. Professor	MB	06
4	Miss. Dipali Pirji Kokani	M.Sc. SET	Asst. Professor	MB	03
5	Miss. Poonam Ravindra Sonawane	M.Sc.	Asst. Professor	MB	02
6	Miss. Pooja Prakash Mali	M.Sc.	Asst. Professor	MB	02

7. List of senior visiting faculty

Sr.No	Name	Designation and Place
--	Nil	--

8. Ongoing /completed research projects by faculty funded by governmental and non-governmental agencies (Last five years):- NIL

9. Research papers published in Journals notified on UGC website (Last five years)

Sr.No	Name of Journal	Title of Research Paper	ISSN/ ISBN No.	Whether peer reviewed. Impact Factor, if any
1	<i>International Journal of Recent Scientific Research</i>	INSECT REPELLENT INDUCED LIPID DIVERSIONS OF PERIPLANETA AMERICANA	0976-3031	Peer Reviewed
2	<i>International Journal of Recent Scientific Research</i>	LACTIC ACID PRODUCTION AND APPLICATIONS: A REVIEW	0976-3031	Peer Reviewed
3	<i>Research Journal Of Biotechnology</i>	Applications of Lipases	22784535	Peer Reviewed
4	<i>Research Journal Of Biotechnology</i>	Isolation, Identification and Susceptibility Testing of Potential Lipase producing Bacterial and Fungal Strains from soil	22784535	Peer Reviewed
5	<i>Advances in Bioresearch</i>	Application of lipase extracted from Pseudomonas aeruginosa SJ2 as a detergent additive	2277-1573	Peer Reviewed
6	<i>Advances in Bioresearch</i>	Simultaneous Determination of Dofetilide and Amlodipine on Dried Blood Spot by using FLD: Application to Pharmacokinetics in Rat	2277-1573	Peer Reviewed

12. Research papers published in National/International Conference-proceedings

Sr.No	Name of the Conference Seminar	Title of Research Paper	ISSN/ ISBN	Volume-Issue-pages	Place and Date
NIL					

13. Number of books and chapter in edited volumes/Books published

Sr.No	Title of the book/chapter published	National/ International	Year of publication	ISBN/ISSN No.	Name of the publisher
NIL					

14. Name of Research Guides

Sr.No	Name of research guide	Ph. D/ M. Phil
NIL		

15. Number of Ph. D/ M. Phil awarded by faculty

Sr.No	Name of Ph. D/M. Phil scholar	Name of the Guide/s	Title of the thesis	Year of registration of scholar	Year of awards of Ph. D/ M. Phil.
NIL					

16. Faculty as chairman/members in National committees/International Committees/ Editorial Boards/BOS/University committees etc.

Sr.	Name of	Name of the body in which full time	Member of	Reviewer
-----	---------	-------------------------------------	-----------	----------

No.	faculty	teacher participated	editorial board	
1	Dr. Swapnil Satish Joshi	<ul style="list-style-type: none"> <li>• <b>Member</b> B.Sc, M.Sc Microbiology Paper setting and practical exam committee</li> <li>• <b>BOS</b> Member</li> </ul>	Paper Setting and Practical Exam Committee KBC NMU, Jalgaon	--
2	Mrs. Mariya Yusuf Husain	<b>Member</b> , T.Y.B.Sc and M.Sc Microbiology Paper setting and practical exam committee	Paper Setting and Practical Exam Committee KBC NMU, Jalgaon	--
3	Ms. Dhanvarsha Dilip Joshi	<b>Member</b> , F.Y.B.Sc., T.Y.B.Sc and M.Sc Microbiology Paper setting and practical exam committee	Paper Setting and Practical Exam Committee KBC NMU, Jalgaon	--
4	Dr. Swapnil Satish Joshi	<ul style="list-style-type: none"> <li>• <b>Member</b> B.Sc, M.Sc Microbiology Paper setting and practical exam committee</li> </ul>	Paper Setting and Practical Exam Committee KBC NMU, Jalgaon	--

#### 18. Awards / Recognitions received by faculty

Year of awards	Name of full time teachers receiving awards from state level, National level, International level	PAN	Designation	Name of the award, fellowship, received from government or recognized bodies
NIL				

#### 19. Numbers of awards / Medals for outstanding performance in sports/cultural activities in National/ International/ State level etc. received by students

Year	Name of the award/Medal	National/International/State etc.	Sports/Cultural	Aadhar/Student ID No.	Name of the Student
NIL					

20. Students Qualifying in State/National/International level examination (NET, SET, GATE, GMAT, GRE, TOEFL/UPSC/MPSC/State government examination, etc.)

Year	Registration No./Roll for the examination	Number of students selected								
		SET	NET	GATE	GMAT	CAT	RGE	TOFEL	Civil services	State Govt. Examinations/Others
NIL										

21. Student progression to higher studies. UG to PG, PG to M. Phil., PG to Ph. D, M. Phil to Ph. D, Ph. D to post Doctoral, etc. (Last Batch, 2016-17)

1. UG to PG

Sr. No.	Student Name	Department Graduated from	Name of the Program admitted	Name of the Institute Joined
1	Borse Vasundhara Rajendra	B.Sc Microbiology	MBA	Sandip Foundation, Nashik
2	Chavan Pooja Bhaskar	B.Sc Microbiology	M.sc Microbiology	North Maharashtra University, Jalgaon
3	Chitodkar Nikita Vijay	B.Sc Microbiology	M.sc Microbiology	S.S.V.P.S Science College, Dhule
4	Deore Bhavesh Rajendra	B.Sc Microbiology	M.sc Microbiology	S.S.V.P.S Science College, Dhule
5	Ingale Komal Anil	B.Sc Microbiology	M.sc Microbiology	S.S.V.P.S Science College, Dhule
6	Jadhav Vishal Mukunda	B.Sc Microbiology	M.sc Microbiology	S.S.V.P.S Science College, Dhule
7	Jaiswal Anuprabha Anil	B.Sc Microbiology	M.sc Microbiology	S.S.V.P.S Science College, Dhule
8	Kele Pooja Prabhakar	B.Sc Microbiology	M.sc Microbiology	S.S.V.P.S Science College, Dhule
9	Mali Varsha Harilal	B.Sc Microbiology	M.sc Microbiology	S.S.V.P.S Science College, Dhule
10	Marathe Deeksha Hemant	B.Sc Microbiology	NIL	
11	Marathe Kunal Rajendra	B.Sc Microbiology	M.sc Microbiology	S.S.V.P.S Science College, Dhule
12	Mhaske Vishal Ramdas	B.Sc Microbiology	M.sc Microbiology	S.S.V.P.S Science College, Dhule
13	Nikumbh Manasi Kiran	B.Sc Microbiology	PG-DMLT	Government Medical College, Dhule

14	Patil Suvarna Vasudev	B.Sc Microbiology	M.sc Microbiology	S.S.V.P.S Science College, Dhule
15	Patil Himanshi Sandip	B.Sc Microbiology	M.sc Microbiology	S.S.V.P.S Science College, Dhule
16	Pawar Ajay Shamarao	B.Sc Microbiology	M.sc Microbiology	S.S.V.P.S Science College, Dhule
17	Shelar Harshal Prashant	B.Sc Microbiology	M.sc Microbiology	S.S.V.P.S Science College, Dhule
18	Sikkalgar Jasmine Ashfaque	B.Sc Microbiology	M.sc Microbiology	North Maharashtra University, Jalgaon
19	Vasave Vinod Maktya	B.Sc Microbiology	M.sc Microbiology	S.S.V.P.S Science College, Dhule
20	Jadhav Pratiksha Vivek	M.Sc Microbiology	PGDMLT	Hire Medical College, Dhule

2. PG to Ph. D or M. Phil to Ph. D.

Sr. No.	Program Graduated From	Department PG from	Student Name	Name of the Institute Joined	Name of the Program admitted
NIL					

22.Placement of outgoing students (Last five years, 2012-2017)

Year	Name of student	Qualification	Held Post	Employer	Package
2017-18	Chaudhari Aishwarya Shamkant	M.Sc Microbiology	Lecturer (CHB)	S.S.V.P.S Science College, Dhule	32000
2017-18	Shelake Popat Sambhaji	M.Sc Microbiology	Microbiologist	Apicore Pharmaceuticals Ltd, Vadodara	2.51 akhs
2018-19	Borase Mukesh Dnyaneshwar	M.Sc Microbiology	Q C Officer	Bio-input Department at Nirmal Seeds	2.41 akhs
2018-19	Gharate Rahul Pandit	M.Sc Microbiology	Microbiologist	AVIK Pharmaceutical Ltd, Vapi	2.61 akhs
2018-19	Patil Kapil Vishwas	M.Sc Microbiology	Q.C. trainee	Neon Laboratories Ltd, Mumbai	2.61 akhs
2018-19	Bhamare Bhagyashree Sunil	M.Sc Microbiology	Laboratory Technician	Anand Pathology Laboratory, Dhule	1.21 akhs
2018	Sharma Kajal Pramod	M.Sc	Microbiologist	Orthoclinical	5.51



-19		Microbiology		Diagnostics	akhs
2018-19	Saindane Mahendra Ratilal	M.Sc Microbiology	Jr. Officer Q.C	Macleods Sarigam Plant, Mumbai	2.61 akhs
2018-19	Suryawanshi Mayur Dileep	M.Sc Microbiology	Executive in Microbiology	Kaliberr Bioscience Pvt. Ltd Nashik	2.51 akhs
2019-20	Kranti Suresh Khairnar	M.Sc Microbiology	Jr Executive in Quality Control	Aarti pharmlabs limited, Palghar	2.51 akhs
2019-20	Buwa Prashant Dnyaneshwar	M.Sc Microbiology	Jr. Lab Technician	HINDLABS Diagnostic Centre, Dhule	1.81 akhs
2020-21	Suryawanshi Rohit Dharma	M.Sc Microbiology	Senior Analyst	Barclays	6lakhs
2020-21	KHATIB MAZHARUDDIN NASIRODDIN	M.Sc Microbiology	Lab Technician	Self Employed	2-4 lakhs
2021-22	Bedse Neha Ravindra	M.Sc Microbiology	HR IT Recruiter	Nashik	2.41 akhs
2021-22	Chaudhari Alpesh Ashok	M.Sc Microbiology	Lab Technician	Hire Medical College, Dhule	1.41 akhs
2021-22	Chaudhari Shivani Vijay	M.Sc Microbiology	Microbiologist	Parshwanath Aqua Ltd, Dhule	1.51 akhs
2021-22	Mali Puja Prakash	M.Sc Microbiology	Lecturer ( CHB )	S. S. V. P. S. College, Dhule	32000
2021-22	Sonavane Punam Ravindra	M.Sc Microbiology	Lecturer ( CHB )	S. S. V. P. S. College, Dhule	32000
2021-22	Mehata Jyoti	M.Sc Microbiology	Microbiologist	Ipca laboratories ltd. Dewas	2.41 akhs

### 23. List of alumni/contribution

Sr. No.	Name of Alumni	Year of Graduation/Post Graduation	Position held	Contact detail (Email, Mobile No.)	Quantum of Contribution
NIL					

### 24. List of eminent academicians and scientists / visitors to the department

NIL

**25. Seminars/ Conferences/Workshops organized & the source of funding**

Sr. No.	Level National/ International/ State	Name of the workshop/Seminar	Durations (From-To)	Number of participants
1	State Level	State Eligibility Test (SET) Paper-I Preparation	24/07/2021	160
2	National	Opportunities in Pharmaceuticals & IT Sector	10/08/2021	100
3	Nation	Sericulture and Biomimetics	21/10/2021	161
4	State	Seminar on Recent Trend in Microbiology and Microbiology	07/03/2022	100

**26. Student profile programmed /course wise:**

Year	Name of the Course/programme (refer question no. 4)	Applications received	Enrolled		Total number of Students
			*M	*F	
2018-19	B.Sc		05	22	27
2018-19	M.Sc		09	11	20
2019-20	B.S.c		07	25	32
2019-20	M.Sc		02	15	17
2020-21	B.S.c		09	21	30
2020-21	M.Sc		06	09	15
2021-22	B.Sc		11	24	35
2021-22	M.Sc		07	22	29

**27. Departmental result ( last five year)**

Year	Program Code	Program Name	Number of students appeared in the final year examination	Number of students passed in final year examination
2018-19		B.Sc	27	23
2018-19		M.Sc	20	11
2019-20		B.S.c	32	30
2019-20		M.Sc	17	15
2020-21		B.S.c	30	30
2020-21		M.Sc	15	15
2021-22		B.Sc	35	31
2021-22		M.Sc	29	27

**28. Number of linkages for faculty exchange/student exchange/training/internship/field trips/job on training/research etc.**

Sr. No.	Title of the linkage	Name of the partnering institution/ industry /research lab with	Year of commencement	Duration (From-To)	Nature of linkage
NIL					

**29. Number of functional MoU's with corporate houses/ industries/other institutes/Universities, etc.**

Organisation with which MoU is signed	Name of the institution/ industry/ corporate house	Year of signing MoU	Duration	List the actual activities under each MoU year wise	Number of students/teachers participated under MoUs
NIL					

**30. Details of Infrastructural facilities**

**Internet facilities for Staff & Students:** Student and staff provided with 20mbps wi-fi access.

**Class rooms with ICT facility:** Smart Class room facility with smart board, also with projector

**Laboratories:** 01 Laboratories with 24 burner points for aseptic inoculation, 01 Plant Tissue Culture laboratory with Laminar Air Flow system.

**List of Equipments/Instruments:**

**List of Instruments**

No.	Name Of Equipments	Quantity	Year Of Purchase	Total Expenditures during Past Three Years (Rs)
1	Laminar Air Flow	01	2005-2006	65000=00
2	Autoclave (Table Top)	03	2005-2006	11570=00
3	Clinical Centrifuge	02	2005-2006	19600=00

4	Oven	02	2005-2006	24000=00
5	Digital Electronic Top Loading Balance	01	2005-2006	32000=00
6	Spectrophotometer	01	2005-2006	31200=00
7	Colorimeter	01	2005-2006	16000=00
8	Nephelometer	01	2005-2006	12000=00
9	Inverted Microscope	05	2005-2006	404000=00
10	Binocular Research Microscope	01	2005-2006	39750=00
11	Autoclave Vertical	01	2006-2007	38975=00
12	Rotary Shaker	01	2006-2007	32930=00
13	Digital Colony Counter	01	2006-2007	10000=00
14	Agarose Gel Electrophoresis	01	2006-2007	3500=00
15	Cooling Centrifuge	01	2006-2007	48000=00
16	UV florescence Analysis Cabinet	01	2006-2007	9000=00
17	Stainless Steel Distillation Plant	02	2006-2007	16500=00
18	Column Chromatography	01	2006-2007	12000=00
19	Poly Acrylamide Gel Electrophoresis	01	2006-2007	20350=00
20	Incubator	02	2006-2007	26000=00
21	P <sup>H</sup> Meter	01	2006-2007	6500=00
21	Micropipette (1µl-10µl)	01	2007-2008	2610=00
22	Micropipette (2µl-20µl)	01	2007-2008	2610=00
23	Micropipette (50µl-1001µl)	01	2007-2008	2610=00
24	Micropipette (100µl-2001µl)	01	2008-2009	2610=00
25	Pen P <sup>H</sup> Meter	02	2008-2009	3160=00
26	Mc-Intosh Jar	01	2008-2009	5430=00
27	Digital Weighing Balance	02	2008-2009	17100=00
28	Western Blotting kit	01	2008-2009	8490=00
29	Western Blotting kit	01	2008-2009	17760=00
30	Genei Genetic teaching kits	09	2008-2009	37680=00

31	UV-Visible Spectrophotometer	01	2009-2010	1,48000=00
32	BOD Cooling Incubator	01	2012-2013	1,67000=00
33	Rotavapor with Chiller	01	2012-2013	1,80000=00
34	Bioreactor	01	2012-2013	3,00,000=00
35	Olympus Trinacular Microscop	01	2012-2013	1,15,000=00
<b>Total Rs.</b>				<b>18,97,935=00</b>

**31. Details on student enrichment programmes (special lectures / workshops / seminar/ Webinar) with external experts**

Sr. No.	Enrichment programmes	Experts
1 2	Webinar	Shri. Shashikant Shinde “State Eligibility Test (SET) Paper-I Preparation”
3	Seminar	Dr. A. M. Deshmukh, “Recent Trends in Microbiology & Microbiology”
4	Webinar	Dr. Chandrashekhar J. Hiware, Dr. Razia Sultana “Sericulture & Biomimetics- The New Era”
5	Webinar	Dr. Kakasaheb Kore, Ms. Kavita Jedhe. “Opportunities in Pharmaceuticals & IT Sector”
6	Industrial Visit	Jain Irrigation System Ltd, Jalgaon
7	Industrial Visit	York Winery Ltd, Nasik
8	Industrial Visit	Sula Wnine, Nasik

**32. Teaching methods adopted to improve student learning-**

- Use of Video Clips
- Project Work
- Video Conferencing Lecture
- Organized Workshop
- Online NPTEL courses
- Online NPTEL/UGC-SWAYAM lectures
- Students seminars
- Field projects/Survey
- Review of research papers (Avishkar)
- Use of Adobe Acrobat reader

### **33. Participation in Institutional Social Responsibility (ISR) and Extension activities**

- Head, Department of Microbiology.
- IQAC member.
- Campus Supervision Committee Member.

### **34. Future plans:**

- To Start Post Graduation in Industrial Microbiology
- Laboratory recognition for Ph.D. research
- Start diploma in food technology

\*\*\*\*\*