

Department of Chemistry



Vision

The development of fundamental understanding, with the emphasis on new structural, synthetic and theoretical techniques applicable in both academic and industrial context.

Mission

We aim to provide the students with sound preparation for requirements of modern industry and provide competency, in basic academic research as well as a cohesive, clearly structured overview of Chemistry.

Goals and Objectives

- To provide a complete description of Chemistry we live in.
- To give more systematic direction to interdisciplinary chemistry.
- To develop scientific attitude and sense of observation among the students.
- To obtain more attention from students towards chemistry and its temperament.
- To create opportunities to develop inborn skills.

CHEMISTRY DEPARTMENTS

Evaluative Report of the Chemistry Department

1. Name of the department : Chemistry
2. Year of Establishment : 1992
3. Names of Programmes / Courses : UG: Chemistry
Offered (UG, PG, M.Phil., Ph.D. : PG : Organic Chemistry
Integrated Masters; Integrated Ph.D etc.)
4. Names of Interdisciplinary course : Nil.
and the departments/units involved.
5. Annual/ semester/choice based credit : CBSGS
system (programme wise) .
6. Participation of the department in the : Computer Science
courses offered by other departments
7. Courses in collaboration with other : Nil.
Universities, industries, foreign
Institutions, etc.
8. Details of courses/programmes : Nil.
discontinued (if any) with reasons.
9. Number of teaching posts :

Post	Sanctioned	Filled
Professor	-	-
Associate Professor	-	-
Assistant Professor	08	08+04

10. Faculty profile with name, qualification, designation, specialization,(D.Sc./D.Litt. /Ph.D. / M. Phil. etc)..

Sr No	Name of Faculty	Qualification	Designation	Specialisation	No of Years of Experience		No of Ph.D. Students guided for the last 4 years
					UG	PG	
1	Dr.D.V.Bhagat	M.Sc.,SET, M.Phil,Ph.D.	H.O.D. Chemistry	Organic Chemistry	22	08	Nil
2	Dr.S.D.Patil	M.Sc.,SET, NET,M.Phil, Ph.D	Assistant Professor	Organic Chemistry	21	08	Nil
3	Dr.S.D.Tupare	M.Sc.,M.Ed SET,NET, M.Phil,Ph.D	Assistant Professor	Organic Chemistry	17	08	Nil
4	Mr.J.V.Patil	M.Sc.,M.Phil	Assistant Professor	Inorganic Chemistry	19	08	Nil
5	Dr.V.R.Jadhavar	M.Sc,B.Ed., M.Phil.,Ph.D	Assistant Professor	Industrial Chemistry	17	08	Nil
6	Mrs.S.V.Chaudhari	M.Sc.B.Ed. M.Phil.	Assistant Professor	Industrial Chemistry	20	08	Nil
7	Mrs.S.T.Morbale	M.Sc.,SET	Assistant Professor	Organic Chemistry	08	08	Nil
8	Mr.M.D.Shirsath	M.Sc.,M..Phil.	Assistant Professor	Agro Chemistry	16	08	Nil
9	Miss.S.B.Shirke	M.Sc.	Assistant Professor	Organic Chemistry	02	02	Nil
10	Miss.S.S.Take	M.Sc.	Assistant Professor	Organic Chemistry	02	02	Nil
11	Mrs.C. S. Patil	M.Sc. D.Ed.	Assistant Professor	Organic Chemistry	-	01	Nil
12	Miss.P.A. Muddhebihalkar	M.Sc.	Assistant Professor	Organic Chemistry	-	01	Nil

11. List of senior visiting faculty:

- Dr.Harischandra Parbat, Associate Prof., Wilson College of Arts and Science, Mumbai.

- Dr.Deepak Mangaonkar, Associate Prof., Mithibai College of Arts and Science, Mumbai.
- Dr.G.B.Sathe, Head Dept. of Chemistry ,Dapoli Urban Bank Senior Science College, Dapoli.
- Dr.Meshram,University of Mumbai
- Dr.Mayur Desai, Gogate College, Ratnagiri
- Dr.Ramanna, Head Dept. Of Chemistry, University of Mumbai
- Miss. Nilam Mhatre, Department of Chemistry ,University of Mumbai.

12. Percentage of lectures delivered and practical classes handled programme wise by temporary faculty.

Course	Working Period	Theory and Practical Delivered
B.Sc.	June 2012 to April 2016	20%
M.Sc.	June 2012 to April 2016	20%

13. Student -Teacher Ratio (programme wise).

Course	Number of Faculty	Number of Students	Ratio
B.Sc. & M.Sc.	12	377	32:1

14. Number of academic support staff (technical) and administrative staff; sanctioned and filled.

Post	Post Sanctioned	Post Filled
Lab Assistant	01	01
Lab Attendant	02	02

15. Qualifications of teaching faculty with D.Sc./D.Litt/ Ph.D/ M.Phil/P.G.

Sr.No.	Qualification	Number of Faculty
1.	M.Phil.	07
2.	Ph.D.	04
3.	P.G	12

16. Number of faculty with ongoing projects from a) National b) International funding agencies and grants received : 03

17. Departmental projects funded by DST-FIST; UGC, DBT, ICSSR, etc. and total grants received :

- UGC –Rs 135000,
- DST-FIST- Rs17,00000
- University of Mumbai –Rs 135000.

18. Research Centre /facility recognized by the University: Nil

19. Publications:

a) Publication per faculty:

Number of papers published in peer reviewed journals (national & international) by faculty and students.

- ❖ National-11
- ❖ International-33
- ❖ Total-44

* Number of publications listed in International Database (For Eg: Web of Science, Scopus, Humanities International Complete, Dare Database -

International Social Sciences Directory, EBSCO host, etc.) : Nil

* Monographs : Nil

* Chapter in Books : 02

(Dr.D.V.Bhagat)

* Books Edited : Nil

* Books with ISBN/ISSN numbers with details of publishers: ISBN-978-93-5149-325-9

Sheth Publishers Private Ltd.

* Citation Index : Nil

* SNIP : 4 papers

* SJR : Nil

* Impact factor : 2-3

* h-index : 4 papers

Number of Publication per faculty:

Sr. No.	Name of Teacher	Number of Publications	Name of Journals	National/International	Impact Factor
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1.	Dr.D.V.Bhagat	07	International Journal of Advanced Research in Biological Sciences	International	1.615
			International Journal of Recent Scientific Research	International	2.6
			IJISSET - International Journal of Innovative Science, Engineering & Technology,	International	5.1
			Bionano Frontier International Publication House ,	International	
			International Journal of Chemical Science,	International	
			Bionano Frontier International Publication House	International	
			Bionano Frontier International Publication House	International	
2.	Dr.S.D.Patil	16	International Journal of Environmental Sciences (Integrated Publishing Association),	International	0.1097
			International Journal of Environmental Sciences (Integrated Publishing Association)	International	0.1097
			International Journal of Environmental Sciences (Integrated Publishing Association),	International	0.1097
			An Indian Journal (Trade Science Inc. – INDIA	National	--
			Orbital- The Electronic Journal of Chemistry (Campo Grande)	National	0.2692
			International Journal of Research in Chemistry and Environment	International	0.453
			An Indian Journal (Trade Science Inc. – INDIA),	National	---
			International Journal of Research Studies in Science, Engineering and Technology	International	1.063

			IOSR Journal of Environmental Science, Toxicology and Food Technology	International	1.83
			International Journal of Green and Herbal Chemistry	International	1.839
			World Journal of Pharmaceutical Research	International	5.990
			Journal of Chemical Biological and Physical Sciences	National	3.406
			International Journal for Research in Applied Science and Engineering Technology	International	5.969
			World Journal of Pharmacy and Pharmaceutical Sciences	International	5.210
			World Journal of Pharmaceutical Research	International	6.805
3.	Dr.S.D.Tupare	12	IJOC Scientific Research	International	0.3
			Letter in Organic chemistry	International	0.8
			I J O C	International	0.4
			E J of B and P Science	International	2.026
			I J A. P.Biomedical Sciences	International	0.8
			International Journal of Chemical Science	International	0.4
			Shodhankan	National	-
			Special issue of Indian Stream R Journal for National conference	National	2.1506
			Special issue of Indian Stream R Journal for National conference	National	2.1506
4.	Dr.V.R.Jadhavar	07	The Journal of Aquatic Biology	National	-
			Indian Stream Research Journals	National	-
			International Journal of Environment and Earth Sciences	International	-
			International Journal of Scientific Research	International	0.3371
			Indian Journal of Research,	National	0.3208
			World Journal of Pharmacy and Pharmaceutical Sciences	International	5.210

			World Journal of Pharmacy and Pharmaceutical Sciences	International	6.647
5.	Mrs.S.T.Morbale	03	Rsc Advances	International	3.29
			Rsc Advances	International	3.29
			DER pharma letter	International	3.29

20. Areas of consultancy and income generated : Nil

21. Faculty as members in

a) National Committees : Nil

b) International Committees : Nil

c) Editorial Boards : Nil

22. Student projects:

a) Percentage of students who have done in-house projects : 3 Projects at Avishkar
including inter departmental/ programme. 3 Projects at National Youth Congress

b) Percentage of students placed for projects in organizations outside the institution i.e. in Research laboratories Industry/ other agencies. : Nil

23. Awards/ Recognitions received by faculty and students : Nil

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

Sr. No.	Dignitary	Status
1.	Dr.AnilK.Patil	
2.	Dr.H.B.Gurav	Rajiv Gandhi College of Arts, Commerce & Science,Vashi
3.	Dr.S.T.Gadade	Dean Faculty of Commerce
4.	Dr. Sadanand.B.Dharap	Chairman BOS, University of Mumbai and Principal Bhausahab Nene College, Pen-Raigad
5.	Dr.Vikas.V.Vaidya	RamnarainRuiaCollege,Matunga
6.	Prof. AnandPukale	Dr.BabasahebAmbedkarCollege,Mahad

7.	Dr. Sunil Patil	Changu Kana Thakur A.C.S. College, New Panvel
8.	Dr. Sandesh Jaybhaye	Birla College of Arts, Science and Commerce, Kalyan
9.	Dr. Mrs. Sugandha Shetye	Dept. of Chemistry, K.J. Somaiya college of Science & commerce, Vidyavihar, Mumbai.
10.	Dr. Ulhas Pandit	B.N. Bandodkar College of Science, Thane
11.	Dr. Manish Hate	Ramnarain Ruia College, Matunga
12.	Dr. Sunita Shirvalkar	
13.	Dr. Jyothi Patwardhan	Ramnarain Ruia College, Matunga

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

: 01

a) District level Workshop on Revised syllabi of S.Y.B.Sc. 2015-16 : 01

b) State level Conference : 01

c) National : Nil

d) International : Nil

26. Student profile programme/course wise:

Name of the course/ Programme	Class	Year	Application received	Selected	Enrolled		Passing Percentage
					Male	Female	
B.Sc.	F.Y.	2012-13	450	108	44	64	
	S.Y.	2012-13	120	114	50	65	
	T.Y.	2012-13	120	90	34	56	60.22
B.Sc.	F.Y.	2013-14	400	117	37	80	
	S.Y.	2013-14	120	109	41	68	
	T.Y.	2013-14	120	117	46	71	74.78
B.Sc.	F.Y.	2014-15	490	102	27	75	
	S.Y.	2014-15	120	117	44	73	
	T.Y.	2014-15	120	108	42	66	88.89
B.Sc.	F.Y.	2015-16	420	111	43	68	
	S.Y.	2015-16	120	112	42	70	
	T.Y.	2015-16	120	114	41	73	90.27
M.Sc.	Part-I	2012-13	50				
	Part-I	2013-14	48	10	07	03	
	Part-I	2014-15	56	20	10	10	
	Part-I	2015-16	53	20	06	14	
M.Sc.	Part-II	2012-13	10				100
	Part-II	2013-14	10				100
	Part-II	2014-15	10	10	07	03	90.00

	Part-II	2015-16	20	20	10	10	80.00
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27. Diversity of Students:

Name of the Course	% of the student from the same state	% of the student from the other state	% of the student from abroad
B.Sc.	100%	Nil	Nil
M.Sc.	100%	Nil	Nil

28. How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defense services, etc? :

29. Student progression:

Student Progression	Against % enrolled
U.G. to P.G.	42.85%
P.G. to M.Phil	-
P.G. to Ph.D.	10%
Ph.D. to post-Doctoral	-
Employed:	
Campus Selection	10%
Other than campus recruitment	42.85%
Entrepreneurship/Self-employment	04%

30. Details of Infrastructural facilities

a) Library

Central Library Books : 7579

Periodicals : 27

e-journals : INFLIBINET DATABASE 80000 e-books + 3500 e-journals

Seating Capacity : 40

b) Internet facilities for Staff & Students : Yes

c) Class rooms with ICT facility : 01

d) Laboratories :

Sr.No.	Name of Laboratories	Area
1.	Physical Laboratory	600 Sqft

2.	Main Laboratory	1398.6 Sqft
3.	Organic Laboratory	800 Sqft

31. Number of students receiving financial assistance from college, University, Government or other agencies:

Class	Year	Total No. of Student	Government(GOI)	YashodhabaiPhalke Awards
F.Y.B.Sc.	2012-13			
S.Y.B.Sc.	2012-13			
T.Y.B.Sc.	2012-13			
F.Y.B.Sc.	2013-14	12	31575	6000/-
S.Y.B.Sc.	2013-14			
T.Y.B.Sc.	2013-14			
F.Y.B.Sc.	2014-15	12	31575	6000/-
S.Y.B.Sc.	2014-15			
T.Y.B.Sc.	2014-15			
F.Y.B.Sc.	2015-16	364	2187040/-	64000/-
S.Y.B.Sc.	2015-16			
T.Y.B.Sc.	2015-16			

32. Details on student enrichment programmes (special lectures / workshops / Seminar) with external experts:

1) Every year Department organizes expert lectures on various issues in

coordination with science association. The List of Resource persons for P.G.is

- ❖ Dr.HarischandraParbat,AssistantProfessor,ChemistryDepartment,Willson College.
- ❖ Dr.DeepakMangaonkar,
- ❖ Dr.G.B.Sathe,Department of Chemistry,Dapoli Urban Bank Senior Science College.
- ❖ Dr.Meshram.

- ❖ Dr. Mayur Desai,
- ❖ Dr. Ramanna,
- ❖ Miss. Nilam Mhatre, Department of Chemistry, University of Mumbai.

2) One day Workshop on Revised syllabi in S.Y.B.Sc. Chemistry Which Organized by Board Of Studies University of Mumbai.

33. Teaching methods adopted to improve student learning:

- ❖ Teaching through audio visual aids.
- ❖ Teaching with the help of structural models to simplify the subject.
- ❖ Outreach programs like Projects, Industrial visit, Research laboratory visit etc.

34. Participation in Institutional Social Responsibility (ISR) and Extension activities:

Active participation of faculty members and students in Social Gathering, NSS Camps, NCC Activity, Various Competitions Organized by various Associations.

35. SWOC analysis of the department and Future plans.

Strengths:

- ❖ A highly motivated team of well qualified and subject specialized academic staff.
- ❖ Well-equipped, spacious, Classrooms and Laboratories.
- ❖ Most of staff are trying to increase their research activities such as MRP, Paper publications, Paper presentation in National and International Conferences.
- ❖ One of the staff member has been working as member of syllabus committee of University of Mumbai for framing syllabus of F.Y., S.Y., T.Y. B.Sc. Chemistry
- ❖ Dr. V.R. Jadhavar is guiding the M.Sc. Student of SMD college Kolad under YCMU Nashik.
- ❖ Dr. S.D. Tupare has worked as External Examiner for M.Sc. Part I&II at Dr. BAM University of Aurangabad
- ❖ All staff members are working as Examiners, Moderators for University of T.Y. B.Sc. Chemistry Examination.
- ❖ Consultancy services
 - water quality analysis
 - Air pollution monitoring

Weaknesses:

- ❖ Infrastructure facilities to be improved.

Opportunities:

- ❖ To Organize national level conference, seminars and workshops

- ❖ To work for receiving UGC,DST and CSIR for minor and major research projects.
- ❖ Development of the instrumental lab and research lab.
- ❖ Campus interview is to be strengthen.
- ❖ Increase number of MRP funded by UGC and University of Mumbai.

Challenges:

- ❖ To inculcate Research temper among students.
- ❖ To enhance employability of students.
- ❖ To improve the writing and communication skill among students & staff.

Future Plans:

- ❖ To start P.G.Programme in Analytical Chemistry
- ❖ To start interdisciplinary research in the department
- ❖ To increase MRP's funded by UGC.
- ❖ To establish the collaboration with various Chemical, Pharmaceuticals industries and research laboratories through MOU.
- ❖ To organize National/International level conference.
- ❖ To organize workshop on NET/SET.
- ❖ To organize Programmes on personality development through seminar method for students.
- ❖ To organize Seminar, Workshop and Conference.