

1. Name of the department:

Zoology

offered by other departments:

Environmental Science with Botany

2. Year of Establishment:

1963

7. Courses in collaboration with other universities, industries, foreign institutions, etc.:

Nil

3. Names of programmes/ courses offered:

UG (Elective: Environmental Science & Pollution)
 PG (Specialization: Oceanography & Fisheries, Animal Physiology), M.Sc. by Research, Ph.D.
 Certificate courses: Waste Management & Vermicomposting

8. Details of courses/programmes discontinued (if any) with reasons:

Nil

4. Names of Interdisciplinary courses and the departments/ units involved:

Environmental Science

9. Number of teaching posts:

Post	Sanctioned (09) Filled (09)	Details
Professors	-	
Associate Professors	03	
Assistant Professors	06	

5. Annual/ semester/ choice based credit system (programme wise):

Credit Based Semester System

6. Participation of the department in the courses**10. Faculty profile with name, qualification, designation, specialization, (D.Sc./ D.Litt. /Ph.D./ M. Phil. etc.):**

Name	Qualification	Designation	Specilaitzation	Expearence (Years)	No. of Ph.D. students guided in last 4 years
Dr. P.G. Kale	M.Sc., PhD	HOD, Associate Professor	Oceanography, Animal Physiology,	35	01 completed 02 registered
Dr. S.T. Ingale	M.Sc., PhD	Vice Principal, Associate Professor	Animal Physiology, Biochemical Taxonomy	33	-
Dr. P.N. Sardesai	M.Sc., PhD	Associate Professor	Oceanography	23	-
S.S. Gupte	M.Sc., NET	Assistant Professor	Entomology	10	-
Dr. Bindu Achary	M.Sc., B.Ed., D.M.E., Ph.D., SET	Assistant Professor	Oceanography	07	-
Dr. J.A. Bhagwat	M.Sc., Ph.D., NET	Assistant Professor	Animal Physiology	05	-
Dr. G.M. Joshi	M.Sc., Ph.D.	Assistant Professor	Oceanography	04	-
D.A. Poojary	M.Sc., NET	Assistant Professor	Oceanography	03	-
S.V. Singh	M.Sc., NET	Assistant Professor	Parasitology	10	-

11. List of senior visiting faculty/Guest:

Nil

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

Ph.D.: 06

M.Sc.: 03

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

3.5%

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

Nil

13. Student-Teacher Ratio (programme wise):

30:1

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

Dr. J.A. Bhagwat

- University of Mumbai (2009-2010) (Rs. 30,000)

Dr. Bindu Acharya

- UGC Minor Research Project (2010-12) (Rs. 1,15,000)

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

- 03 Lab Assistants
- 11 Lab Attendants
- 1 Peon (shared with Botany Dept.)

18. Research centre/ facility recognized by the University:

Yes. Recognized research center for registering students for Ph.D. degree.

19. Publications:

(Publication per faculty)

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

Dr. P.G. Kale

- A.P. Gandhi and P.G. Kale (2011) Phoma medicaginis induced alteration in the efficacy of Adathoda vasica. Biochem. Cell. Arch., 11(2): 327. ISSN 0972-5075
- A.P. Gandhi and P.G. Kale (2011) Similarities in toxicity of pathogenic fungus (Phoma medicaginis) and chromium (VI). Journal of Cell and Tissue Research, 11(2): 2821-2826.
- P.G. Kale (2012) Harnessing the potential of students to remediate environmental problems. Proc. Int. Conf. Environment and Humanities Eco-Revolution 2012, pp 34-37. ISBN 978-81-920431-2-8
- P.G. Kale and R. Thomas (2012) Caring For Nature by Leaning on Nature for Healthcare. Proc. Int. Conf. Environment and Humanities Eco-Revolution 2012, pp 200-202. ISBN 978-81-920431-2-8
- P.G. Kale (2012) Study of Plankton and Benthos in the Panvel Creek. Proc. Nat. Semi. Biodiversity and Conservation of Coastal & Marine Ecosystems of India 2012, pp 29-35. ISBN 978-81-925489-0-6
- Aarti Yadav, Afshaa Dabir and P.G. Kale (2012) Jellyfish Bloom- A Threat to Marine Life. Proc. Nat. Semi. Biodiversity and Conservation of Coastal & Marine Ecosystems of India, pp 94-07. ISBN 978-81-925489-0-6
- Amruta Prasade, Vishal Bhawe, Deepak Apte and P.G. Kale (2012) A review of Discodorid Opisthobranh Mollusks Along Indian Coasts. Proc. Nat. Semi. Biodiversity and Conservation of Coastal & Marine Ecosystems of India, pp 76-81 (2012). ISBN 978-81-925489-0-6
- Anjali Mali, S.A. Kawle and P.G. Kale (2012) Biodiversity of Marine Shore Birds. Proc. Nat. Semi. Biodiversity and Conservation of Coastal & Marine Ecosystems of India, pp 29-35. ISBN 978-81-925489-0-6
- Priti Yadav, S. Vishwakarma and P.G. Kale (2012) Threats to Sea Turtles: It's the time to Act. Proc. Nat. Semi. Biodiversity and Conservation of Coastal & Marine Ecosystems of India, pp 35 (2012) ISBN 978-81-925489-0-6
- P.J. Panaskar and P.G. Kale (2012) Protection of Whales. Proc. Nat. Semi. Biodiversity and Conservation of Coastal & Marine Ecosystems of India, pp 91-93.

ISBN 978-81-925489-0-6

- Babita Bhatia, P.G. Kale, J.V. Daoo and P.P. Panchal (2012) Abhrak Bhasma Treatment ameliorates proliferation of germinal epithelium after heat exposure in rats. Ancient Sci. Life, 31(4): 171-180. ISSN 0257-7941
- Babita Bhatia, P.G. Kale and J.V. Daoo (2013) The Effects of Abhrak Bhasma on Serum Testosterone Levels and Epididymal Sperm Quality in Heat-Stroke Wister Rats Internat. Journal of Medicine and Pharm. Sci. (IJMPS), 3(1): 49-60. ISSN 2250-0049
- Babita Bhatia, P.G. Kale, J.V. Daoo and P. Meshram (2013) Testicular Oxidative Stress: Protective Effects of Abhrak Bhasma in male Wister Rats after heat exposure. Int. J. Pharm. Pharm. Sci., 5(2): 472-477. ISSN 0975-1491
- Babita Bhatia, P.G. Kale and J.V. Daoo (2013) Action of Abhrak Bhasma on Hemato- Biochemical profile of Hyperthermic Male Wister Rats. Int. J. Pharm. Sci. Rev. Res., 19(2): 47-55. ISSN 0976-044X

Dr. J.A. Bhagwat

- J.A. Bhagwat and A.M. Bhagwat (2010) Kp. bark an effective anti-inflammatory drug. Int. J. Pharm. Biol. Sci. 4: 71-76. ISSN 973-6808.
- J.A. Bhagwat and S.T. Ingale (2012) Antimicrobials from marine microbes from Indian Coasts: A Review. Proc. Nat. Seminar on Biodiversity and Conservation of Coastal & Marine Ecosystems of India, pp 91-93. ISBN 978-81-925489-0-6
- J.A. Bhagwat and A.M. Bhagwat (2013) Stem bark: A renewable resource for wound healing. Int. J. Pharm. Biol. Sci., 7(2): 19-26. ISSN 0973-6808

Deepak Poojary

- Deepak Poojary, G.M. Joshi and P.G. Kale (2012) Study of the effect of sand dredging on macrobenthos of Thane Creek. Proc. Nat. Seminar on Biodiversity and Conservation of Coastal & Marine Ecosystems of India, pp 91-93. ISBN 978-81-925489-0-6
- Deepak Poojary (2013) Queer vision: Portrayal of Queer Community in Bollywood Cinema. Proc. Nat. Seminar on 100 yrs of Indian Cinema - Issues & Challenges in Retrospection, pp 75-80. ISBN 978-81-925489-2-0

20. Areas of consultancy and income generated:

Nil

21. Faculty as members in

Senate: Nil

Board of Studies: Nil

Faculty of Science: 01

Academic Council: 01

Syllabus Committee: 05

22. Student projects

a. Percentage of students who have done in-house projects including inter departmental/ programme:
100%

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:**Dr. P.G. Kale**

- Received an award of 'Paryavaran Mitra' instituted by Thane Janata Sahakari Bank along with 6 NGOs, at a function organized at Saraswati Secondary School Auditorium on 21 May 2010.
- Received the 'Best Teacher Award' in the 'Lifetime Achievement' category, instituted by G.D. Pol Foundation, Navi-Mumbai in a program at YMT Institute of Management, Kharghar, Navi Mumbai, in 2012.

Deepak Poojary

- First Prize in the 'Expert Category' and the Prize for Maximum Tree Count, at Dombivali Green Race, organised by NYASS Trust, Dombivali, on 12 Feb. 2012.
- Third prize at the Inter-collegiate Solo Singing Competition for Teachers at 'Gandharva' Intercollegiate Fest organized by K. G. Joshi and N. G. Bedekar College of Commerce, Thane, on 15 January 2013.

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

Name	Institute	Year
Prin. B.B. Sharma	Vaze College, Mumbai	2009
Mr. M.M. Chaturvedi	Department of Zoology, Delhi University	2009
Ms. Vishalakshmi Naik	Director, Quality Solutions	2009
Dr. A.M. Bhagwat	Director, C.B. Patel Research Center & Dean, School of Science, NMIMS, Parle	2009
Dr. Tanmay Kale and Dr. Rani Gupta	Symbiosis Inst. of Health & Hospital Management	2009
Mr. Umesh Verma	IFS, Chandrapur	2010
Dr. Deepak Apte	Assistant Director, BNHS	2010
Dr. Shubhangee Satam	NGO-Little More	2010
Dr. Madhuri Pejaver	Dean, Faculty of Science and Prin. B.N. Bandodkar College, Thane;	2010
Mr. Vijay Bhide	Director, Vanaparva Forest Development Institute, Khed.	2011
Mr. Aftab Khan	MD, August Seafoods	2011

Name	Institute	Year
Dr. Rajendran C.G.	Department of Human Physiology, Bradford University	2011
Dr. Nandakumar Moghe	Rtd. Conservator of Forest & Govt. Consultant for WL Cons.	2011
Dr. Madan Chaturvedi	Department of Zoology, Delhi University	2012
Dr. Parvish Pandya	Dept. of Zoology, Bhavan's College, Mumbai	2012
Dr. Asad Rehmani	Director, BNHS, Mumbai	2012
Dr. B C. Choudhury	Head, Endangered Species Management Dept. WII, Dehradun.	2012
Dr. Wenresti Gallardo	Asso. Prof. & Coordinator, Aquaculture & Aquatic Resources Management, Philippines	2012
Dr. Janalezza Esteban	IUCN, Philippines	2012
Dr. Sanjay Deshmukh	Head, Life Science Dept., University of Mumbai	2012
Dr. S. Balachandran	Assistant Director, BNHS	2012
Dr. Y.S. Shouche	Scientist, National Centre for Cell Sciences, Pune	2012
Dr. Prasad Modak	Exe. President, Environmental Management Centre, LLP.	2012
Dr. K. Kathiresan	Centre for Advanced Studies, Annamalai University, TN	2012
Dr. Dharmendra Shah	Asso. Prof., Dept. of Botany, M.S. University, Baroda	2012
Dr. A.C. Anil	Chief Scientist, NIO, Goa	2012
Dr. S.M. Karmarkar	Hon. Director, C.B. Patel Research Institute, Vile Parle	2012
Dr. V.S. Somavanshi	Director General, FSI, Mumbai	2012
Cmdt. N.V. Ramarao	Officer In-charge, Maritime Rescue Coordination Centre, Mumbai	2012
Dr. Rekha Vartak	Head, Biology Cell, HBCSE	2012
Mr. Brijesh Verma	National Public International School, Singapur	2012
Dr. Prasad Karnik	Director, Institute of Sleep Sciences, Mumbai	2012

25. Seminars/ conferences/ workshops organized & the source of funding:

- National Seminar on "Biodiversity and Conservation of Coastal and Marine Ecosystems of India", on 13-15 September 2012 in collaboration with with Bombay Natural History Society (BNHS), Association of Teachers in Biological Sciences (ATBS), International Union for Conservation of Nature and Natural Resources (IUCN) and Mangroves for the Future (MFF).
- Workshop on "Revised syllabus of T.Y.B.Sc. - Theory, Practicals and Question Paper Pattern" in collaboration with Board of Studies, University of Mumbai on 17th July 2010.

26. Student profile programme/ course wise:

Year	Applications received	Selected	Enrolled		Pass percentage
			M	F	
<i>T.Y. B.Sc.</i>					
2012-13	40	40	12	28	90%
2011-12	34	34	11	23	94%
2010-11	41	41	17	24	82.9%
2009-10	30	30	17	13	100%
<i>M.Sc.</i>					
2012-13	Admission through University of Mumbai	10	3	7	90%
2011-12		12	5	7	91.6%
2010-11		10	3	7	90%
2009-10		07	2	5	57%

27. Diversity of Students:

Name of the Course	% of students from the same state	% of students from other states	% of students from abroad
F.Y. B.Sc	95	5	-
S.Y. B.Sc	100	-	-
T.Y. B.Sc	100	-	-
M.Sc.	100	-	-

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

Data not available

29. Student progression:

Student progression	Against % enrolled
UG to PG	30%
PG to M.Phil.	Data not available
PG to Ph.D.	2%
Ph.D. to Post-Doctoral	Data not available
Employed	100%
• Campus selection	
• Other than campus recruitment	
Entrepreneurship/ Self-employment	2%

30. Details of Infrastructural facilities:

- Library: 2319 Books (+ books in central library)
- Internet facilities for Staff & Students: Available
- Class rooms with ICT facility: Available
- Laboratories: 5

31. Number of students receiving financial assistance from college, university, government or other agencies:

Annexure IX (pg. 264)

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

- The Department celebrates Zoofest, a festival of Zoology, which is a year round activity involving popular lectures, interaction with student achievers, field visits, preparation of exhibits etc. They are

encouraged by awarding prizes for their projects, presentations, etc.

- The participation of students in Inter-collegiate events related to Zoology is promoted and assisted.
- Counseling and career guidance is given to the students.
- Students are encouraged to participate in the National Competitive examinations, like International Biology Olympiad and guidance for the same is extended by the teachers.

33. Teaching methods adopted to improve student learning:

- The Department has a practice of continuous evaluation by way of tutorials and periodic tests. Students are asked to do projects and assignments to improve their performance. Quiz as an enjoyable way of making students alert and studious is being practiced for F.Y. B.Sc. students. S.Y. B.Sc. students are annually asked to carry out project work to inculcate the habit of self study. T.Y. B.Sc. and M.Sc. students are being asked to give oral presentations to make them confident.
- Power point presentations and audio-visual clips are screened for enhancing student's understanding in the subject.
- Field work is an integral part of study of Zoology. Teachers willingly accompany students on short (one day) and long (several days) excursions to kindle their interest in wild life and conservation.

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

- Students of UG and PG classes are encouraged to prepare skits to be enacted in slums areas of Ghatkopar to increase their awareness towards social, environmental and health problems.
- Interaction with BMC Health Officers is organized annually to train the students in preventive measures against communicable diseases.
- The yearly exhibition of Zoofest is open to the Schools and several schools in the vicinity send their Teachers and Students to visit the exhibition. Teachers of nearby schools are encouraged to use laboratory and technical know how of the Department teachers to solve their scientific queries.
- Through the Association of Teachers in Biological Sciences, a study circle activity for NET-SET aspirants was organized.
- Students are assisted in preparing for competitive examinations like International Biology Olympiad, National Initiative to Undergraduate Students programme, KVPY scholarship examination and so on.

- Several teachers of the Department guide students in their projects for Young Scientists award.
- Three teachers of the Department are active in NSS programmes as Programme Officer and committee members.
- One teacher is involved in the Extension Activities of University of Mumbai.
- One teacher is involved in INSPIRE training of students under DST scheme.
- Several teachers of the department are involved in imparting informal education of students through Vishnugupta Project and Vanaparva Forest Development Institution Ltd.

35. SWOC analysis of the department and future plans:

- **Strengths:**

Efficient, sincere and hardworking team of faculty members, many of whom have talents other than teaching. A well-equipped laboratory and teachers with research experience.

- **Weakness:**

Despite the best efforts put in by the faculty members could produce only a few rankers at T.Y. B.Sc. and M.Sc. examinations of University of Mumbai.

- **Opportunities:**

Students are very hard working and sincere so that the Department can have better meritorious achievements. With teacher's talents in Performing Arts, Dramatics and Literature would inspire the students to develop better overall personality. With infrastructural facilities quality research can be carried out by students and teachers.

- **Challenges:**

To promote hard work and uplift the scholastic capacities of students through appropriate motivation is a major challenge. To cultivate research aptitude among UG, PG students is yet another challenge.

- **Future Plans:**

To develop interdisciplinary add on courses. To intensify research activity in the department.