

Dr. Rupali Dilip Gaikwad, M.Phil,Ph.D.

Present position

- Assistant Professor and Head of the Department

Contact Details (Mention e-mail) – fergusson.edu or despune.org



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Work Experience

- Teaching: 20 years
- Research/Industrial: 15 years

Personal Profile

I did my B.Sc in Microbiology(2000), M.Sc (2002) and M.Phil.(2005) in Environmental Science, from Shivaji University Kolhapur and Ph.D (2020)in Savitribai Phule Pune University, Pune. I have started my teaching carrier in the year 2003 in the Department of Environmental Science at Shivaji University, Kolhapur. In the year 2005 I worked as lecturer at Yashwantrao Chavan Institute of Science. Then I shifted to Pune in the year 2007and worked as in Sent Mira's College for six months. I joined Fergusson College in September 2007 as assistant professor. In 2009 I got an addition responsibility to work as a Head of the Department of Environmental Science. Since 2007 I am teaching to UG and PG classes till date and working as member and in charge for various college committees. I have completed a BCUD minor research project during 2012-2014. Also completed various projects and guided the students for research under CPE, CE and DBT scheme. I am creating awareness about various environmental aspects in various schools colleges and society using various online platforms, offline sessions, All India Radio Talks, articles in news papers and magazines etc.

Course(s) Taught (Only Titles)

1. Environmental Chemistry
2. Water and water resources
3. Natural resource management and sustainability
4. Land and soil conservation and management
5. Environmental Biotechnology
6. Environmental Toxicology
7. Environmental geo and atmospheric science
8. Water and wastewater treatment technologies
9. Environmental Management Systems
10. Climate change sustainability

Field of Specialization/Areas of Interests

- Waste management
- Water and Wastewater treatment
- Environmental pollution and waste management
- Application of microbiology and biotechnology for remediation and restoration
- Wastewater Treatment
- Toxicological studies of environmental contaminants

Education

- **Ph.D.** – (Environmental Science): from 2011 to 2020

- **Title of the Thesis:**

“Studies on the Effluent of Laundry: Treatment, Toxicity and its Fate in the Environment”

Name of University: Savitribai Phule Pune University, Pune

Institution (Research Centre): Department of Environmental Science, Savitribai Phule Pune University, Pune

Year of Award: January 2020

- **M.Phil:**

(Environmental Science): 2005, Shivaji University Kolhapur.

- Master of Science- (Environmental Science): 2002, Shivaji University Kolhapur.

- Bachelor of Science- (Microbiology): 2000, Yashwantrao Chavan Institute of Science, Satara affiliated to Shivaji University Kolhapur

Fellowship/Awards/ Certifications/Achievements/Recognitions

N.A

Member of College Committees/ Professional Bodies and Others

College Level	Professional Bodies	Others
<ul style="list-style-type: none">• In- charge Central Admission Committee (S.Y. B.Sc)	<ul style="list-style-type: none">• BOS member (V C nominee) on Board of Studies in Botany, Environmental Science, Zoology and Physical Education for Abeda Inamdar Senior College of Arts, Science & Commerce, (Autonomous)Pune	Member of “Shakti” A National Movement for Women, Pune
<ul style="list-style-type: none">• In -charge : NAAC criteria 7		
<ul style="list-style-type: none">• In-charge for Climate Reality project activities		

<ul style="list-style-type: none"> Coordinator for Green Campus committee 	<ul style="list-style-type: none"> Member BOS-subcommittee Savitribai Phule Pune University 	Member of Indian Meterology Society, Pune region
	<ul style="list-style-type: none"> BOS member (V C nominee) on Board of Studies in Environmental Science for.T.C. College, Baramati. 	Member of Solid Waste Management and Solid Waste Third Party Audit committee PMC, Pune

Employment History

1) Organization : Department of Environmental Science, Shivaji University Kolhapur

Role : lecturer

Duration : 2003 to 2005

Responsibilities	<ul style="list-style-type: none"> Conduct lectures and Practical's of PG students Guidance for Dissertation work of PG students Study tours and Field visits Awareness campaign's
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2) Organization : Yashwantrao Chavan Institute of Science, Satara

Role : Lecturer

Duration : 2005 to 2006

Responsibilities	<ul style="list-style-type: none"> Conduct lectures of Environmental Awareness course at SY BSc. Guidance and Evaluation of Project
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3) Organization : St. Mira's School and College, Pune

Role : Lecturer

Duration : 2005 to 2006

Responsibilities	<ul style="list-style-type: none"> Conduct lectures of Environmental Awareness course
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4) Organization : Fergusson College, Pune

Role : Assistant Prof. and Head

Duration : 2007 to till date

Responsibilities	<ul style="list-style-type: none"> Conduct lectures and practical's at UG and PG level Guidance and Evaluation of Project Arranging field visits Organization of Guest lectures, Seminar, Workshops, Conference and training programs, awareness and cleanliness drives for Students and Faculty member based on Environmental Aspects Admission In-charge for S.Y. BSc. Non-grant units In-charge for green campus committee of college
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	<ul style="list-style-type: none"> • In-charge for NAAC Criteria 7 • Chairman for BOS in Environmental Science under autonomy
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Research Projects

Title of the Project	Name of Funding Agency	Amount (Rs)	Duration (Year) (From To)	Type (Minor/Major)	Outcome
“Studies on the Effluent of Laundry Units: Treatment, Toxicity and It's Fate in Environment”	BCUD	1,90,000/-	2012 -2014	Minor	1.Characterization of Laundry wastewater from various units from Pune area was carried out. 2.Microbes degrading surfactants were isolated. 3.Toxicity and wastewater treatment studies were conducted and recommendation are given for mitigation of problems arising due to laundry wastewater.

Research Publications in National and International Journals

1. Gaikwad, R.D., Todankar, S.S. and Aphale, P.V. (2021) Studies on The Environmental Status of Pashan Lake Pune, Maharashtra, India , 2nd International Conference on Biodiversity and Environmental Management (BEM 2021).
2. R.D. Gaikwad, D.S. Kumbhar, Dr. K.M. Kodam, Dr. P.R.Thakur (March 2018) Development of Portable Optical Sensor Based System for Detection of Phosphate in Wastewater, International Journal of Chemical and Physical Sciences, IJCPs Vol. 7, Special Issue 12, ICAFM (Part-II) -,ISSN: 2319-6602
3. Gaikwad R.D.,Kalumbe A., Kodam K., Thakur P.(2014). Isolation, identification and characterization of anionic surfactant degraders from detergents in laundry wastewater”, proceeding of conference “Modern Analytical Techniques in Microbiology” organized by department of Microbiology, Fergusson College, Pune.
4. Bhosale R.A. (2003),Effect of Biofertilizers on Growth of Cicer arietinum , proceedings of national conference entitled “Recent Advances In Plant Microbial and Environmental Biotechnology” organized by C. T. Bora college, Shirur, Dist. Pune.

Participation in Conferences/Seminars/Symposia/Workshop:

1. General **Orientation Course** (2009) organized by UGC-ASC, University of Pune, Pune
2. **Refresher course** (7.03.2012 to 27.03.2012) in Environmental Science organized by Department of Environment Science, University of Pune, and UGC-ASC University of Pune, Pune 411007
3. Completed two-week Interdisciplinary **Refresher Course** on "Advanced Research Methodology" from 22 March - 05 April, 2022 organised under the Ministry of Education sponsored Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT) scheme organised by TLC Ramanujan College.
4. **Three weeks Faculty Development Program (FDP)** in Geoinformatics" conducted by C-DAC, Pune during 04 -23 June 2012.
5. **One week** training program on "Radiochemistry and applications of Radioisotopes" during 19-25 November, 2012
6. **One week FDP** on "Teaching and research process in science education" organised by H. V. Desai College, Pune and Pune University from 4th to 11th April 2016.
7. **Two weeks Faculty Development Programme (FDP)** in Entrepreneurship (9 to 20 December 2019) sponsored by NSTEDB, Dept. of Science and Technology, Govt. of India
8. **One week** National Online level Faculty Development Program (**FDP**) on "ICT Tools for Effective Teaching Learning from 11th to 16th May 2020, organised by School of Mathematical Sciences, Swami Ramanand Teerth Marathwada University, Nanded.
9. Two days National level Faculty Development Program on "Facilitation Techniques and Online Tools for College Teachers, organised by S.M. Joshi College, Pune on 27th and 28th May 2020
10. **One week** online Multi- Disciplinary Faculty Development Programme (**FDP**) with A Grade on "MOOCs, E-Content Development and OER from 28th May to 3rd June 2020 organised by Government of Karnataka, Department of Collegiate Education.
11. Two Days Faculty Development Program on online Teaching and E-content " on 3rd and 4th June 2020 organised by Indian Institute of Digital Education (IIDE) , D. Y. Patil College of Engineering and Technology and St. Xaviers College, Mumbai.
12. A Hands-On Workshop on "The Bodhi Tree and SAFE Tools for Effective Online Teaching on 21 June 2020 and attended interaction session and completed pre and post video workshop online activities organised by **IIT Bombay**, funded by MHRD, Govt. of India.
13. **Three weeks** online course on "Remote Sensing and GIS Technology and Applications for University Teachers and Government Officials" conducted by Indian Institute of Remote Sensing (**IIRS**) , **ISRO, Dehradun**, During 13th June 2020 to 1st July 2020.
14. **One week** Pedagogical Online Training for teachers on Tools for online Teaching Learning and Evaluation from 1st to 6th July 2020, organised by School of Mathematical Sciences, Swami Ramanand Teerth Marathwada University, Nanded.
15. **One Week** Faculty Development Programme (**FDP**) on "Module on Curriculum Design and Pedagogy for Autonomous Colleges in Maharashtra" Organized by S.P. Sanstha's, Sangamner Nagarpalika Arts, D. J. Malpani Commerce and B. N. Sarda Science College (Autonomous), Sangamner, Maharashtra in collaboration with Rashtriya Uchchatar Shiksha Abhiyan (RUSA), Maharashtra and Center of Excellence in Teacher Education, TISS, Mumbai from 22 to 27 February 2021.
16. **Two weeks online** training on 'Water Audit and Conservation in Industries' organised by centre for science and environment, New Delhi from 19th July 2021 to 1st August 2021.

17. Completed a training program of the Climate Reality leadership Corps in October 2021. Now got a opportunity to work as **Climate leader**.
18. Presented paper in the international e-Conference on “Emerging Methodologies in Pharma, Environmental and Life Sciences” organised by Ismail Yusuf College of Arts, Science & Commerce Jogeshwari East, Mumbai held on 18th and 19th June, 2020.
19. Evaluation of an alternative milk delivery to reduce the plastic waste generated out of plastic pouches - Automatic Milk Vending Machine. Rajas Shinde, Prachi Pande, Gurudas Nulkar, Rupali Gaikwad. Pune: Bhartiya Vigyan Sammelan, 2017.
20. “Entrepreneurship development through Phytoremediation” paper presented and published in the proceeding of the conference held in 2010, entitled “We Meet” organised by Shakti Association and College of Engineering, Pune.
21. .“Traffic Noise Quality Monitoring at selected areas from Fergusson College Road” paper presented and published in the proceeding of the conference held in 2010, entitled “We Meet” organised by Shakti Association and College of Engineering, Pune.

Events Organized/Coordinated:

Sr. No	Name of the Event	Name of organizing Institute/ College/ University	Nature of contribution	Dates
1	Tree plantation Drive	150 different plant species have been planted in college campus. Including the Botanical Garden. Care has been taken in selection of the species; all species planted are native which will support the other Biodiversity inhabiting the campus.	Co-ordinator of tree plantation committee	12th July 2017.
2	Watershed Management workshop	Under the College with Excellence program in association with ACWADAM, Pune two days' workshop on Watershed Management was organized for MSc students. Students benefited from the Workshop through various case studies and practical's conducted during the workshop.	Organizer	9th .10th February 2018
3	Kirloskar Vasundhara	Under Kirloskar Vasundhara Film	Coordinated activities at college level	January 2017

	International Film Festival	Festival number of documentaries was screened followed by discussion on various issues of Environment and protection.		
4	A River walk	A River walk has been organized by the Department in association with Jeevitnadi, Pune under Kirloskar Vasundhara Film Festival for school children. Students from Ahilyadevi, New English School Tilak Road actively participated in a walk to understand cultural, social, Environmental aspects of the River Ecosystem.	Coordinated the activity	
5	National Science Day	MSc I students of the Department have conducted discussion sessions on Environmental Science, an Interdisciplinary branch of science for 7 th standard students of Ramanbaug High School, Pune.	Guidance to students for the activity	28 th February 2018
6	F.Y.B.Sc Excursion to Pansad	Student's Study visit was organised at Pansad, for study of biodiversity and ecological aspects	Coordinated the study visit	February 2018
7	Tree plantation Drive	Around 150 different plant species have been planted in college campus Including Botanical Garden and hill near campus.	Coordinator of tree plantation committee	12th July 2018
8	Entrepreneurship Development Workshop	Under DBT Star College Scheme workshop was conducted by Dr. Adesh Gokhale Council Member DES on start-up program for Entrepreneurship Development on	Organizer	18 th August 2018
9	Green Economy Workshop	Under DBT Star College Scheme workshop was conducted by Dr. Gurudas Nulkar Head, Ext-MBA Symbiosis International University, Pune on Green Economy on was organized for MSc	Coordinated the activity	29 th August 2018

		students in Department of Environmental Science.		
10	Best Practices in Waste Management workshop	Under DBT Star College Scheme workshop was conducted by Mr. Shrikant Parab Director, Asia Affairs, Delta Group, USA on Best Practices in Waste Management was organized for students in the Department of Environmental Science.	Organizer	30 th August 2018
11	Film Screening and Interaction with S. Nalla Muthu	Interaction was organized with the director of the film Clash of Tigers on Teachers and students of other colleges along with Fergusson College students involved in the program.	Organizer	2 nd January 2019.
12	River Ecology Workshop	Under DBT Star College Scheme Workshop was conducted by Oikos, Pune on River Ecology on was organized for students in the Department of Environmental Science.	Organizer	7 th January 2019
13	Biodiversity Conservation: Issues and Solutions Seminar	Under DBT Star College Scheme conducted Seminar by Dr. Madhukar Bachulkar Cholekar Principal Vijay Singh Yadav Science College; Kolhapur on Biodiversity Conservation: Issues and Solutions	Organizer	8 th January 2019
14	Hydrogeology Workshop	Under DBT Star College Scheme conducted Workshop was conducted by Dr. Chris Bradley Senior Lecturer School of Geography, Earth and Environmental Sciences University of Birmingham UK on Hydrogeology on was organized	Organizer	8 th January 2019
15	Climate Change Workshop:	Under DBT Star College Scheme Workshop was conducted with Professor John Bull Associate Professor (Senior Lecturer) in Pollution Ecology, School of Geography, Earth and Environmental	Organizer	17 th January 2019

		Sciences, University of Plymouth on Climate Change on was organized for students		
16	Bioremediation of Toxic wastes Workshop:	The DBT Star College Scheme seminar was conducted by Dr. Yogesh Patil Professor and Head Research and Publication Symbiosis International University, Pune on Bioremediation of Toxic wastes was organized for students.	Organizer	22 nd January 2019
17	Colloquium on Sacred Groves	In association with Maharashtra Vriksha Samvardhini has been conducted on Commonwealth Award winning Documentary screening “Sacred Groves: Traditional treasure-trove of Environment” has been done. Number of NGOs from Pune and Mumbai area have been involved.	Organizer	11 th February 2019
18	Environment Day Celebration:	College has participated in events organized by Pune Municipal Corporation on World Environment Day. It includes Cycle Rally, awareness campaigns, plantation drive. For the event this year many government and other officials were present.	Organizer	5 th June 2019
19	Tree plantation drive	Plantation drive was conducted in Fergusson College campus and Fergusson hill. This drive was organized in association with Pune Municipal Corporation.	Coordinator tree plantation committee	1 July 2019.
20	Kirloskar Vasundhara International Film Festival:	1. Ramnadi Parikrama: Under Kirloskar Vasundhara International Film Festival, Eco-Rangers program has organized, to understand the Ramnadi from its source region near Khatpewadi to Pashan lake a Parikrama has been organized. The stretch which has been adopted by students of college is Pashan Lake Stretch, where awareness and action oriented programs have been conducted for the entire year. The findings of various research projects and activities also presented in	Activity coordinator	14/9/2019
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		<p>2.Ramnadi Yuva Sansad. Kirloskar Eco-rangers' inauguration program:an introductory program hasbeen organized on on Ramnadi Restoration Mission. Program wasfollowed by Workshop on insect photography entitled 'Joy at Fingertips' by Mr. Alok Shevde</p> <p>3. Ramnadi Yuva Sansad: The program have been hosted by Fergusson college where 15 different colleges have presented their work regarding Ramnadi Restoration Mission in Yuva-sansad The Mula and Mutha are well known rivers of Pune, but Ramnadi is the third river which flows through Bavdhan-Pashan-Baner suburbs Around 3-lakh citizen are located at the bank of the river. To create awareness and action for this neglected river, the department has taken initiative to organize Ramnadi Yuva Sansad during 14 th KVIFF. The Sansad have listened to student's research, analysis and argument. Finding of this event will be used for preparing policy, recommendations and actions plan for the Ramnadi Restoration. The Sansad have been be presided by a panel of esteemed jury.</p>		27/7/2019
21	Beat the Plastic Pollution:	Under Kirloskar Vasundhara Film Festival in association with Terre Policy Center, awareness programs on Plastic Pollution have been organized. have given a talk on Micro plastics and Consequences of Plastic Pollution.	Organizer	4/1/2020
22	Wild India Film Festival	A film festival organized by Fergusson College in association with Nature Walk, Adventure Foundation from 22 to 25 Aug 2019. Various National and International wildlife documentary screened during this festival. Nature walk conducted in Fergusson College campus and Kamala Nehru Park in presence of renowned botanist like Dr. Mandar Datar, Dr.Sachin Punekar and Dr.S.D.Mahajan. On 24/8/2019 Shri. Madhav Gadgil, Shri. S.D.	Organizer	22 to 25 Aug 2019.

		<p>Mahajan, Sachin Puneekar, Rahul Marathe interacted students in Panel discussion organized on current issues of Biodiversity conservation. Eco-quiz was conducted for undergraduate and postgraduate students on 24/8/2019. Wildlife conference was held on 25/8/2019. Mr. Nalla Mutthu conducted a workshop on 'Basics of wildlife Filmmaking workshop on 25/8/2019. Wild India Film festival concluded on 25/8/2019 with very informative talk by Dhritiman Mukherjee followed by a award winning film screening.</p>		
23	Plastic free campus	<p>To aware the masses about plastic pollution collection drive and awareness activities like flash mob on song in front of main building, Kirloskar Vasundhara International film festival in Balgandharva Rangmadir, JM Road on 7th January 2020 have been performed by students</p>	Organizer	2/10/ 2019
24	Life Cycle Assessment	<p>In association with Sharada Shakti, a session has been organized. Students learned the basics of Life Cycle Assessment as well as calculating Ecological Footprint at the individual level.</p>	Organizer	2/8/2019
25	Climate Reality program	<p>Under Climate Reality Program on an interaction with has been organized to discuss various policy interventions to be made to make college more sustainable and Eco-friendlier</p>	Organizer	14/12/2019
26	Conservation dynamics in Central India Tiger Reserves	<p>An interaction has been organized Students benefited by the interaction in terms of various techniques used by</p>	Coordinated the activity	7/12/2019

		Madhya Pradesh Forest Department in Tiger Conservation.		
27	Western Ghats and its Ecosystem	An invited talk on Lesser-Known Ecosystems has been successful towards making students aware about various neglected ecosystems of Western Ghats like Rock outcrops and their conservation issues.	Coordinated the activity	16/9/2019
28	Maharashtra Star rating program	An interaction was fruitful in understanding Air pollution scenario in Indian cities and the role of common citizens towards the pollution tolerance.	Coordinated the activity	18/7/2019
29	The Climate Reality Project	Sessions on solar Energy, Biodiversity Conservation, Rainwater Harvesting etc conducted Green Schools of the Future for the master trainers. Further, these experts have been connected to master trainers through online platforms and offline interactions as and when requested by individual institutions.	Coordinated the activity	6th July 2019
30	Master's Training Program on Green Campus	A training was organized to train the team leaders from various schools from Deccan Education Society.	Organizer	25 th and 26 th September 2019
31	Study Visit to Uttarakhand	Students visited a forest to study ecotourism and forest research institute	Coordinated the activity	
32	Biodiversity of India	Students learned about the importance of Biodiversity of India	Coordinated the activity	5th October 2020

33	Interaction with Alumni fellowship opportunities in the Environmental field	She also talked about various fellowship opportunities in the Environmental field including SPARK Fellowship by BAIF.	Organizer	19th Feb 2021
34	Session on wetland day	Students understood wetlands of Pune and their importance	Organizer	3rd February 2021
	Session on Hydroponics	Students understood the technique of Hydroponics	Coordinated the activity	11th Feb 2021
35	World Meteorological Day	Students learned about the concept of “Climate Crisis : Action Begins Now”	Coordinated the activity	23rd march 2021
36	Pune City Air Action Plan	Students learned about the air pollution monitoring of Pune City	Coordinated the activity	9 th march 2021.
37	Environmental Sustainability and Resilience in the context of Sustainable Development Goals	Students learned about Sustainability and what strategies are needed to achieve SDGs	Coordinated the activity	25th March 2021.
38	Interaction with Alumni: Meet a friend	Students interacted with alumni and learned about aspects of wastewater treatment	Coordinated the activity	17th July 2021

39	Moth Week	Students learned about How every student can participate and contribute in data collection	Coordinated the activity	24th July 2021
40	Spider Week	During the five days 20 species of spiders have been identified and documented.	Coordinated the activity	14th to 22nd August 2021
41	Interaction with Alumni Tracking illegal wildlife crime	Students understood pros and cons of wildlife crime and how to track these illegal activities	Coordinated the activity	15th December 2021.
42	Big Butterfly Month	On this occasion students of the Environmental science department conducted a Butterfly Survey of Fergusson College Campus	Coordinated the activity	September 2021
43	Ban on Single use Plastic	The purpose of the event was to propose Fergusson College to initiate activities to ban Single Use Plastic in the Campus and declare it as 'First College to Ban Single Use of Plastic' by adopting authenticated verification methods. The college is continuing to make efforts to remain a Single Use Plastic Free Campus.	Organizer	11 th October 2021
44	Metal bottle for my friend	To avoid the use of plastic bottles on 29th October 2021 metal bottles were distributed among the workers.	Organizer	29th October 2021

45	Nadi ki Pathshala	The program was organized in association with Vanrai, Jal Biradari, College of Agriculture, Pune, College of Agriculture Rahuri and Yashada, Pune. The course focuses on understanding the river Ecology and managing our rivers accordingly.	Organizer	28th March 2022
46	International Conference on Biodiversity and Environment Management	Department has organized International Conference on Biodiversity and Environmental Management (BEM) in association with the Academic Partners, Centre for Sustainability, Department of Forestry and Environmental Science, University of Jaywardenepura, Sri Lanka and Deccan Education Society's Fergusson College (Autonomous) Pune, India on was organized on 12th -13th November 2021 (online) has laid foundation of conscious thinking and living a sustainable life.	Coordinated the activity	12 and 13 November 2021, online
47	Workshop on sustainable and Eco-friendly products	Under STRIDE (Component I) workshop was organized on eco-friendly products to make students aware about the opportunities on designing and developing eco-friendly products.	Coordinated the activity	6 th May 2022
48	World Environment Day 2022	Observance of World Environment Day was organized on the topic Climate change and Role of youth in Tribal areas.	Organizer	5 th June 2022

Additional skills/Activities

- Conducted Green, Energy and Environmental Audit of College in assistance with students and other faculty members of the department.
- Conducted Many awareness programs on the theme of Single Use Plastic Ban, Water conservation and Sustainable Living.

Course Content Developed (e-content)

Consultancy Services

- Water and wastewater analysis
- Compost Analysis