



Maharshi Dayanand College Of Arts, Science and  
Commerce

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## Department of Chemistry

Year of establishment 1962

**ACADEMIC AUDIT**

**2019-20**

**7<sup>th</sup> March 2020**

# Faculty Profile (07 Teaching Faculty)



**Dr. A. R. Anthony.(Head)**  
M. Sc., Ph. D., GATE  
Research guide for  
M.sc/PhD



**Dr. M. D. Kulkarni,**  
M. Sc., Ph. D., NET  
Research guide for M.Sc/PhD



**Mr. S. R. Pawar, M. Sc.**  
Recognized PG Teacher



**Dr. V. V. Thorat**  
M. Sc. B.Ed.,SET, Ph.D.  
Recognized PG Teacher Recognized  
Guide for Ph.D.,



**Mr. B. T. Nikam, M. Sc.,  
SET**  
Recognized PG Teacher,  
Pursuing Ph. D.



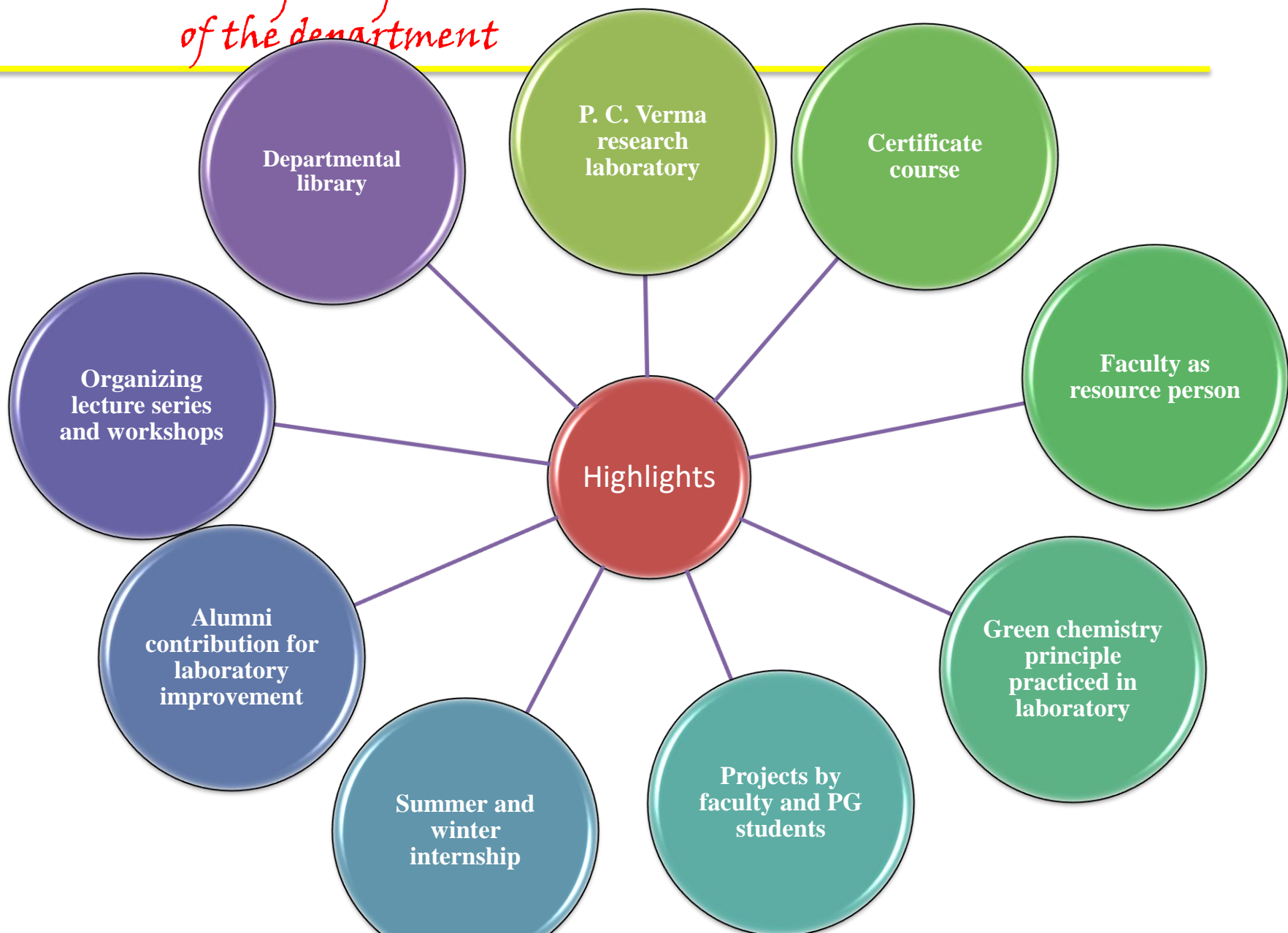
**Dr. A. B. Patil, M. Sc.,  
Ph. D., NET, GATE**  
Recognized PG Teacher Recognized  
Guide for M.Sc. And Ph.D  
Post Doctorate Xiamen University China  
23 International Scopus indexed  
publications, H-Index-8, i-10-08



**Dr. R. H. Gaikwad,**  
M.Sc., Ph.D.,NET, GATE,  
PGD-CTM,MRSC

# Highlights of the department

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# PTA meeting (Science dept)



## TYBSc Chemistry PTA meeting



## Departmental Activities : 2019-2020

Activity	Details	Students benefited
<b>Visits</b>	<b>Industrial:</b> 1. At. Rabale-MIDC (Dr. V. V. Thorat)	<b>35</b>
	2. (CCRT-Lab) Thane-MIDC (Dr. R.H.Gaikwad, Dr. A. B. Patil)	<b>45</b>
	<b>Institutional:</b> PG students (visit to Haffkiene Institute) (Dr. A. R. Anthony, Dr. M. D. Kulkarni, Dr. V. V. Thorat)	<b>11</b>
<b>Chemical Fest</b> (Intercollegiate)	Chelas: Intercollegiate Laboratory safety workshop	<b>106</b>
	Chem-Eminence-2019-20: An Intercollegiate Chemical Science Fest	<b>100</b>
<b>Alumni Support</b>	<b>Mr. Ashok Mangani:</b> Workshop on Calibration of glassware	<b>59</b>
	<b>Dr. Sachin Gondhalkar:</b> Judge for intercollegiate poster competition	<b>100</b>
	<b>Mr. Pratap Mane:</b> Chief guest and speaker for Chelas laboratory safety workshop	<b>106</b>
	<b>Mr. Gaurve Pratap:</b> Motivational talk for higher education	<b>42</b>

## Departmental Activities : 2019-2020

Activity	Details		Students benefited
<b>Invited talk</b>	<b>Resource person</b>	<b>Category</b>	
	<b>Dr. Amol Naik</b>	Career guidance and opportunities in Chemistry present and future.	<b>61</b>
	<b>Dr. Manjusha Karve</b> , (Head, Dept. of Chemistry, University of Mumbai)	Introduction of separation techniques	<b>74</b>
	<b>Mr. Pratap Mane</b> , station officer fire brigade Mumbai	Safety in the laboratory:	<b>106</b>
	<b>Dr. N. Chandan</b> (Vice-principal, Siddharth college, Mumbai)	Motivational talk and guidance for higher education in abroad	<b>100</b>
	<b>Dr. Sachin Gondhalikar</b> (Sr. Scientist Aditya Birla, Taloja)	Career guidance and poster judge	<b>100</b>
	<b>Ms. Namrata Howal</b> (NSS program officer, Asst. Prof. Dept. of History, M.D. College, Parel)	Environmental issues: Swachchata and combating plastic pollution	<b>61</b>
<b>Entrepreneurship development program</b>	Preparation of Vanishing & Cold Cream, by <b>Dr. A. R. Anthony</b> , Head Dept. of Chemistry		<b>40</b>
<b>Activities for Safety</b>	Workshop conducted for <b>teaching, non-teaching, and students</b> on domestic gas usage, leakage detection, mechanism of pressure regulation, etc.: Ms. Shifa Kazi		<b>50</b>

# Visits

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## Industrial visit

(CCRT-Lab) Thane-MIDC (Dr. R.H.Gaikwad,  
Dr. A. B. Patil)



Industrial  
Visit



## Institutional visit



PG students (visit to  
Haffkiene Institute) (Dr. A.  
R. Anthony, Dr. M. D.  
Kulkarni, Dr. V. V. Thorat)

# Chelas: Intercollegiate laboratory safety workshop

## Activities

1. Laboratory safety lecture
2. Jingals and slogans
3. Poster presentation
4. Safety Tambola
5. Demonstration on fire extinguisher



Students benefited: 106

Colleges participated: 5





# CHEM-EMINENCE: Intercollegiate Science Festival

Supported by  
American Chemical Society, USA (Poster prizes)  
and  
Royal Society of Chemistry, London (£ 250)

1. Chem Chase
2. Chem Mania
3. Chem Muse
4. Poster presentation
5. Chem Tambola
6. Chem Dance
7. Musical Periodic Chair

Students benefited: 100  
Colleges participated: 7



**CHEM-EMINENCE**  
**2019-20**



Workshops



Workshop on calibration  
(Skill development)



Workshop on  
Entrepreneurship (Skill  
development)



Workshop on domestic  
Gas usage (HPCL)

# Workshop on calibration (Skill development)



**Mr. Ashok Manghani**  
**(alumnus)**

**Number of students benefited: 59**



# Workshop on Entrepreneurship (Skill development)



# Activities for safety



# (HPCCL) Workshop on domestic Gas usage



# Invited talk

Career guidance and opportunities in Chemistry present and future: by **Dr. Amol Naik**



Introduction of separation techniques: **Dr. Manjusha Karve**, (Head, Dept. of Chemistry, University of Mumbai)

Environmental issues: Swachhata and combating plastic pollution: **Ms. Namrata Howal**



# Certificate course



Inauguration with Principal and chief guest



**Inaugural speech**  
**DR. MANJUSHA KARVE**  
HOD, Chemistry,  
University of Mumbai



Practical session

Topic: "Separation techniques in Chemical Laboratories"  
(28 November 2019 to 05 December 2019)



Lecture session



Group photo

Number of  
Participants: 35

## Certificate course Schedule

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Date and time	Activities	Recourse person
<b>28/11/2019</b> 10am to 11.30am	<b>Introductory lecture</b>	<b>Dr. Manisha Karve</b> , HOD Chemistry, University of Mumbai
<b>28/11/2019</b> , 12 to 3pm.	<b>Workshop on Safety measures and first aid</b>	<b>Dr. Rupesh Gaikwad</b> , Assist. Prof in Chemistry and safety consultant
<b>29/11/2019</b>	<b>Column chromatography</b>	<b>Dr. Mrunalini Kulkarni</b> , Asso Prof in Chemistry
12.30 pm to 2.00pm	Theoretical aspects and applications	
2.15pm to 5.15pm	Practical session	
<b>30/11/2019</b>	<b>Ion exchange chromatography</b>	<b>Prof Anil V. Nagvekar</b> , (Retired )
12.30pm to 2.00pm	Theoretical aspects and applications	
2.15pm to 5.15 pm	Practical session	
<b>02/12/2019</b> , 8.00am to 1.30pm	<b>Industrial Visit</b> , Promas Research Laboratory Pvt. Ltd, Navi Mumbai	Incharge teacher: <b>Dr. V.V.Thorat</b> , Asso Prof in Chemistry
<b>02/12/2019</b> 2.00pm to 4.30pm	<b>Instrumental Separation Techniques in Chemical Laboratories</b>	Resource person: <b>Dr. Ashok Mhaske</b> , Proprietor, M/S Scietia Qualitek, Navi Mumbai
<b>03/12/2019</b>	<b>Distillation- Simple, Vacuum, fractional &amp; Steam</b>	<b>Mr. B.T.Nikam</b> Assist Prof in Chemistry
12.30pm to 2.00pm	Theoretical aspects and applications	<b>Mr. B.T.Nikam</b> , Assist Prof in Chemistry
2.15pm to 5.15 pm	Practical session	<b>Dr. M.D.Kulkarni and Mr. B.T.Nikam</b>
<b>04/12/2019</b>	<b>Solvent extraction</b>	<b>Mr. S.R. Pawar</b> , Asso Prof in Chemistry
12.30pm to 2.00pm	Theoretical aspects and applications	
2.15pm to 5.15 pm	Practical session	
<b>05/12/2019</b> 12.30-3.00pm	<b>Evaluation and Valedictory program</b>	Prof. Incharge: <b>Dr. A.R. Anthony</b> , HOD Chemistry



# Certificate course

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Lecture session



Lecture session



Students interaction  
with Principal



Practical session



Lecture by Ex-  
faculty



Valedictory ceremony

# Industrial visit (Under certificate course)

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**Industrial Visit, Promas Research Laboratory Pvt. Ltd, Navi Mumbai**

# Healthy Practices

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## Farewell to Mrs. Bharati Pujari



# Students achievements

- Miss. Archana: Best out going student & Miss. Maharshi (2019-2020)
- Miss Vidisha Kamble Miss University (2019-2010)
- Mr.Harsh Arya(M.Sc. student) NET Exam Cleared(2019-2010)



## Students achievements in Intercollegiate events

Sr .no	Name of Participant	prize	class	specific event
1	Sakharkar Mithil	first prize	FYBSC	Chem muse
2	Padiyal Dhairat	runnerup	SYBSC	Chem muse
3	Ashwinee Ahire	second prize	TYBSC	CHEM Dance
4	Vidisha Kamble	second prize	TYBSC	CHEM Dance
5	Swapnali Yedekar	second prize	TYBSC	CHEM Dance
6	Sayali Gurav	second prize	TYBSC	CHEM Dance
7	Shivani Jadhav	second prize	TYBSC	CHEM Dance
8	Riya Mayekar	second prize	TYBSC	CHEM Dance
9	Malap Shivani	second prize		Poster Competition
10	Dhonde Shreya	second prize		Poster Competition
11	Lagvankar Kaveri			Poster Competition
12	Chunekar Mitali			Poster Competition
13	Ambekar Kiran			Poster Competition
14	Vishe Kiran			Poster Competition
15	Kamble Divya	third prize		Poster Competition
16	Jain Yukta	third prize		Poster Competition
17	Vishal.S.Karan			Poster Competition
18	Akash.R.Damshet			Poster Competition
19	Sakshi.V.Rane			Poster Competition
20	Suchita Kalankar			Poster Competition

## Students achievements in Intercollegiate events

Sr .no	Name of Participant	prize	class	specific event
21	Vidisha Kamble			Treasure Hunt
22	Ashwinee Ahire			Treasure Hunt
23	Sayali Gurav			Treasure Hunt
24	Swapnali Yedekar			Treasure Hunt
25	Vidisha Kamble	first prize		Chem-Chase
26	Sayali Gurav	first prize		Chem-Chase
27	Swapnali Yedekar	first prize		Chem-Chase
28	Ashwinee Ahire	first prize		Chem-Chase

## Students achievements in Chelas

Sr .no	Name of Participant	prize	class	specific event
1	Ms. Shweta Patil	2 <sup>nd</sup> Prize	F.Y.B.Sc.	Jingal (Intercollegiate)
2	Ms. Ashwini Ahire	2 <sup>nd</sup> Prize	T.Y.B.Sc.	Slogan (Intercollegiate)

## Students achievements in sports

Sr .no	Name of Participant	prize	class	specific event
1	Ms. Ashwini Ahire	2 <sup>nd</sup> Prize	T.Y.B.Sc.	200 M running (college level)
2	Ms. Swapnali Yedekar	2 <sup>nd</sup> Prize	T.Y.B.Sc.	State level Yoga competition

## Students participation INDIAN CHEMICAL SOCIETY (MUMBAI BRANCH)

SR.NO.	NAME	CLASS
1	Karan Santosh vishe	FYBSc
2	Sakshi Deepak Thorat	FYBSc
3	Sushil Anant Kadam	FYBSc
4	Vighnesh Bapso Jadhav	FYBSc
5	Aniket . V. Jadhav	FYBSc
6	Saima Bangi	FYBSc
7	Amey Pokharankar	FYBSc
8	Akshay Mogade	FYBSc
9	Akash Ashok Jadhav	FYBSc
10	Kiran Bhagwan Ambekar	FYBSc
11	Ketak Pramod Yelve	FYBSc
12	Phinehas Chengala	FYBSc
13	Apoorva Sanjay Chavan	FYBSc
14	Sakshi anil Patil	FYBSc
15	Dhananjay. S .Patil	FYBSc
16	Nira .A. Dabholkar	FYBSc
17	Omkar Vitthal Mane	FYBSc
18	Sai Shantaram Jagtap	FYBSc
19	Rahat Abduljallal Shaikh	FYBSc
20	Shruti Shashikant Thorat	SYBSc
21	Mayuri Chandrakant Borge	SYBSc
22	Archana Sunil Gawarkar	TYBSc

## SUMMER RESEARCH PROGRAM

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- **17<sup>th</sup> May – 20<sup>th</sup> Jun' 19**
- **Ms. Archana Gawarkar (SYBSC 201819)** did summer research program under the mentorship of **Dr. Rupesh H. Gaikwad** from Maharashtra Dayanand College, Mumbai
- Summer Research Program on topic ***Synthesis and Characterization of Unnatural amino acids Containing Peptides***
- With **Dr. K. Muruga Poopathi Raja** ,  
**Chemical Biology and Biophysics Laboratory, Department of Physical Chemistry, School of Chemistry , Madurai Kamaraj University.**



## SUMMER RESEARCH PROGRAM

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- 16th May -18th Jun' 2019
- Mentored **Ms. SHIVANI BALKRISHNA MALAP** (SYBSC 201819) did summer research program under the mentorship of **Dr. Rupesh H. Gaikwad** from Maharashi Dayanand College, Mumbai
- Summer Research Program on topic **perovskite synthesis and its applications in solar cell**
- With **DR. ATUL CHASKAR**  
NATIONAL CENTRE FOR NANOSCIENCE AND NANOTECHNOLOGY, MUMBAI

## WINTER RESEARCH PROGRAM

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- 29th Oct. to 14th Nov. 2019 :
- **MS. NIRA ANIL DABHOLKAR FYBSc (2019-2020)**
- **MS. SAIMA SALAUDDIN BANGI , FYBSc(2019-2020)**
- **Mr. PRAFUL DEEPAK VADAY, M.Sc Part I (2019-2020) )** did summer research program under the mentorship of **Dr. Rupesh H. Gaikwad** from Maharashtra Dayanand College, Mumbai
- On the project "Eminent Scientist of the World" currently under development at Nehru Science Centre, Mumbai.

## *Research activities by PG Students*

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*Project completed by P. G. Students guided by Dr. A.R. Anthony*

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- 1) Determination of amount of acetic acid in commercial samples of vinegar by Kiran Maurya .
- 2) Determination of Caffeine in commercial and noncommercial tea samples by Ms.Sadaf Khan
- 3) Determination of ascorbic acid contents in fruit juice and commercial sample by Instrumental and non Instrumental method by Mr.Sushant Nagtilak

*Ongoing research project for P. G. Students guided by  
Dr M.D.Kulkarni*

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- ❖ Synthesis of chalcone and conversion to flavanone under solvent free conditions
- ❖ Synthesis and characterization of Para-red Azo dye complexes
- ❖ Synthesis of imidazole derivatives by greener methods
- ❖ Natural organic acid promoted Beckmann rearrangement
- ❖ Synthesis of heterocyclic compound from anthrone
- ❖ Preparation of cyclohexanone compounds and their condensation with aromatic aldehydes

# Alumni support

- ❑ Redesigning of laboratory apparatus
- ❑ Repairing of broken glassware
- ❑ Customizing the glassware and apparatus

From Mr. Ashok Manghani (alumnus)

