

Shri Shivaji Education Society Amravati's
Science College, Congress Nagar, Nagpur
Internal Quality Assurance Cell

DEPARTMENT OF CHEMISTRY

INTERNAL ACADEMIC AUDIT

2022-2023

1. A. Faculty Strength:

Faculty	Recruited	Vacant	Remarks
Regular	UG=9,PG=1	02	
CHB	01	--	
Ad-hoc	UG=03,PG=2	--	
Non-teaching	06	03	

B. Faculty profile

Name	Highest Qualification	Designation	Specialization	Teaching Experience
1. Prof. R. U Khope	M. Sc, M Phil, B. Ed, Ph. D.	Head and Professor	Physical Chemistry	30Years
2. Prof. P. S Utale	M. Sc, Ph. D.	Professor	Organic Chemistry	23Years
3. Prof. Y. K Meshram	M. Sc, SET, Ph. D.	Professor	Organic Chemistry	27Years
4. Prof. J. K Gunjate	M. Sc, SET, NET, Ph. D.	Professor	Organic Chemistry	20 Years
5. Prof. R. D Urkude	M. Sc, Ph. D.	Professor	In-Organic Chemistry	17 Years
6. Prof. R. A Deshmukh	M. Sc, Ph. D.	Professor	Organic Chemistry	17Years
7. Dr. S. S. Dhote	M.Sc Ph.D	Assistant Professor	Organic Chemistry	13 Years
8. Dr. Priyadarshani N. Deshmukh	M. Sc, Ph. D	Assistant Professor	Organic Chemistry	5 Years
9. Dr. Vrushali Kinhikar	M. Sc, Ph. D	Assistant Professor	Organic Chemistry	14 Years

10. Dr. Shubhangi J. Kene	M. Sc, Ph. D	Assistant Professor	Analytical Chemistry	3 Years
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2. Student's strength

Year	Group			Number of Students Admitted
B.Sc. Semester I	B.Sc. Semester I	PCM	56	
		CZM	36	
		CBM	36	
		CBZ	65	
		CBG	30	
		CGM	26	
		PCG	30	
		CMBT	110	
		Total	389	
	B.Sc. Semester III	PCM	46	
		CZM	28	
		CBM	27	
		CBZ	46	
		CBG	20	
		CGM	17	
		PCG	18	
		CMBT	71	
		Total	273	
	B.Sc. Semester V	PCM	55	
		CZM	39	
		CBM	29	
		CBZ	44	
		CBG	22	
		CGM	22	
		PCG	17	
		CMBT	79	
		Total	307	
	M.Sc.Semester I	Chemistry	26	
	M.Sc.Semester III	Chemistry	26	
	Ph.D.		10	
	Value Added Program		01	

P. G. STUDENT INDUCTION PROGRAMME	Yes, No
ACADEMIC PLANNINGS	Yes, No
BRIDGE COURSE TAUGHT	Yes, No
REMEDIAL COURSE TAUGHT	Yes, No

3. Student Performance

A. Result Analysis (Winter 2022) UG & PG

Programme Name	Number of students who appeared in the final year examination	Number of students who passed in final year examination	Pass Percentage
UG			
.BSc Sem I	315	166	52.69
BSc Sem III	269	158	58.76
BSc Sem V	306	212	69.28
M.Sc. I Year	25	11	44
M.Sc. III Year	25	10	40

B. Result Analysis (Summer 2023) UG & PG

Programme Name	Number of students who appeared in the final year examination	Number of students who passed in final year examination	Pass Percentage
.BSc Sem II	279	104	37.27
BSc Sem IV	262	134	51.14
BSc Sem VI	301	197	65
M.Sc. IISem	23	9	39.13
M.Sc. IV Sem	26	14	53.84

C. Achievements

A- (Medals/Awards/Prizes at University level)

Sr. No.	Name of the Students	Class	Title
1	Mr Vishal kharachwal	MSc	Best Student Award
2	Mr.Vishal Kharchwal	MSc	Secured First Position in Youth Parliament organized by Law Forum, Nagpur held on 9/8/2022.
3	Mr.Vishal Kharchwal	MSc	Won Second Prize in Inter-collegiate Debate competition organized by LAD college, Nagpur held on 23/09/2022.
4	Mr.Vishal Kharchwal	MSc	Secured Second (winner team) Position in Inter-collegiate Debate competition organized

			by Smt. KDM Girls College, Nagpur held on 23/09/2022.
5	Mr.Vishal Kharchwal	MSc	Won First Prize in State level Debate competition organized by Vidyabharati Mahavidyalay, Amravati, held in November-2022.
6	Mr.Vishal Kharchwal	MSc	Secured First Prize in Speech in YIN Kala Mahotsav 2022 organized by Sakal Media Group & Vidarbh IAS academy.
7	Mr.Vishal Kharchwal	MSc	Secured Second Position in State level Debate competition organized by S. K. Porwal College, Kamptee held on 07/10/2022.
8	Mr.Vishal Kharchwal	MSc	Won Second Prize in Debate competition organized by Bank of Baroda on dated 11/10/2022.
9	Mr.Vishal Kharchwal	MSc	Won Second Prize in Inter-collegiate Poetry competition organized by Manohar Kamdi Mahavidyalay, Nagpur on dated 18/10/2022.
10	Mr.Vishal Kharchwal	MSc	Secured First Position in Abhirup Yuva Sansad Movement & Competition in 2022-23 organized by Abhirup Yuva Sansad Yuvak Biradari.
11	Mr.Vishal Kharchwal	MSc	Won First Prize in Quiz competition held on the occasion of 124 th birth anniversary of Dr. Panjabrao alias Bhausahab Deshmukh organized by Science College, Nagpur on the dated 27/12/2022.
12	Mr.Vishal Kharchwal	MSc	Secured 4 th position in National Youth Parliament of India organized by Government New Law college, Indore held on 03/01/2023.
13	Mr.Vishal Kharchwal	MSc	Secured 1 st position in 16 th National Inter-University Debate competition (Hindi Section) organized by G. B. Pant University of Agriculture & Technology, Pantnagar held on 14 -15/01/2023.
14	Mr.Vishal Kharchwal	MSc	Secured Second Position in National Debate competition organized by Shiksha Mandal, Wardha on the occasion of 47 th death anniversary of Kamalnayan Bajaj held on 22 & 23 January 2023.
15	Mr.Vishal Kharchwal	MSc	Secured Second Position in District Youth Parliament organized by Nehru Yuva Kendra, Nagpur on dated 28/01/2023.
16	Mr.Vishal Kharchwal	MSc	Honoured with Nagpur City Best Orator in Debate competition on the occasion of birth

			anniversary of Swami Vivekanand organized by Lotus Cultural & Sporting Association held on 29/01/2023.
17	Mr.Vishal Kharchwal	MSc	Represent RTM Nagpur University & secured First Position in Elocution competition in 36 th Inter-university West Zone Youth Festival 2022-23 (Association Of Indian Universities) organized by Ganpat University, Gujrat held from 10 th to 14 th February 2023.
18	Mr.Vishal Kharchwal	MSc	Represent RTM Nagpur University & secured First Position in Debate competition in 36 th Inter-university West Zone Youth Festival 2022-23 (Association Of Indian Universities) organized by Ganpat University, Gujrat held from 10 th to 14 th February 2023.
19	Mr.Vishal Kharchwal	MSc	Secured First Position in Debate competition in 36 th Inter-university Youth Festival 2022-23 (Association Of Indian Universities) organized by Jain (Deemed-to-be University) held from 24 th to 28 th February 2023.
20	Mr.Vishal Kharchwal	MSc	Secured Second Position in Elocution competition in 36 th Inter-university Youth Festival 2022-23 (Association Of Indian Universities) organized by Jain (Deemed-to-be University) held from 24 th to 28 th February 2023.
21	Mr.Vishal Kharchwal	MSc	Won First Prize in Inter-collegiate Debate competition organized by Shrimati Binzani Mahila Mahavidyalay, Nagpur held on 23/03/2023.
22	Mr.Vishal Kharchwal	MSc	Won First Prize in Inter-collegiate Debate competition organized by Vasantao Naik Govt Art and Social Science, Nagpur held on 28/03/2023.
23	Mr.Vishal Kharchwal	MSc	Represent RTM Nagpur University in 2 nd International Youth Festival-One World 2023 organized by Lovely Professional University held from 6 to 8 April 2023.
24	Mr.Vishal Kharchwal	MSc	Won First prize in Debate competition organized by Atal Yuva Parv, Nagpur.
25.	Akshay Bhatkulkar	B.sc (2022-2023)	Qualified 2024 IIT JAM (Subject- Chemistry)
26	Ritik Paunikar	B.sc (2022-2023)	Qualified 2024 IIT JAM (Subject- Maths)

B- Merit Position of UG Students in RTMNU

Sr. No.	Name of the Students	Merit Position
1	Khushboo Krishna Kolhe	7 th
2	Sanket Vishnu Mehatre	4 th

C- Merit Position of PG Students in RTMNU

Sr. No.	Name of the Students	Merit Position
1	Ms.Manisha Sharma	8 th

10- Student's Progression:

No. of students enrolling in higher Education	Name of institution joined	Name of program admitted to
UG to PG	04	M.Sc .
PG to Research		
Placement	01	Staff Trainee with Ultratech cement limited
On-Campus		
Off-Campus		

(i) Students' publication in Conferences/ Journals:

Title of the Paper	Name of Author	Title of journal	Year of publication

(ii) Students' participation in Seminar/ Conferences:

Sr. No.	Name of Students	Conference type	Participation as
	Mr Ameya Dhore	National Symposium on "Functional Materials for Sustainable Development" 10-12 Oct, 2022	Poster Presentation
	Ms Triveni Fulkar	National Symposium on "Functional Materials for Sustainable Development" 10-12 Oct, 2022	Poster Presentation
	Mr Ameya Dhore	Indian science congress held at RTM Nagpur University Nagpur 3 rd to 7 th Jan 2023	Poster Presentation

	Shraddha Zade	National Symposium on “ Functional Materials for Sustainable Development”	Poster Presentation
	Mrinal Chilbule	National Symposium on “ Functional Materials for Sustainable Development”	Poster Presentation
	Sonali Jogi	National Symposium on “ Functional Materials for Sustainable Development	Poster Presentation
	Sonali Jogi	108 th Indian Science Congress Association	Poster Presentation
	Maithili Kanchanwar	National Symposium on “ Functional Materials for Sustainable Development	Poster Presentation
	Diksha Gedam	of water produced by Hospital in sewage Treatment plant	Participation

(iii) Students’ Extension Activity/ Extracurricular activity

(iv)

Sr. No	Name of the activity	The number of students who Participated
1.	A Visit To Central Ground Water Board Nagpur 20 th Feb 2023	33
2	Eco-Friendly Holi Colour Making Workshop” on 01/03/2023	94
3	Celebration of world water 25 th March 2023	
4	Inter-University Workshop on “Cosmetics And Allied Products”	60
5.	State Level Workshop on Beneficial Effects of Radiation Technology and Indian Nuclear Energy Program in collaboration with IARP ,BARC,Mumbai	120
6	ation of “World Ozone Day” Guest lecture and Poster competition for PG students.	60
7.	PG student Visit to Raman Science Center	25

(v) Participation of Students in online/MOOCs courses/ NPTEL/ SWAYAM

Sr. No.	Name of the Students	MOOCs / NPTEL/ SWAYAM
01	Prashant Mungle	Introduction to research Research Methodology

		Introduction to professional scientific Communication
2.	Prachi Khobragade	Introduction to Research Research methodology Effective Writing Reactive Intermediate Carbenes and Nitrenes

5. Faculty

I. Research Paper Publications

A. Total Number of publications:

- i) International ____04
- ii) National __ NIL

B. Bibliometrics of the publications during the last Academic year based on average citation index in Scopus/ Web of Science or PubMed/ Indian Citation Index

Title of the Paper	Name of Author	Title of journal	Year of publication	Citation Index	Institutional affiliation as mentioned in the publication	Number of citations excluding self-citation
Synthesis of Oxygen & Nitrogen containing heterocycles using Zirconiumdioxide/mixed oxide nanoparticles reusable greencatalyst : A comprehensive update	Dr. J. K. Gunjate	Current organic chemistry journal [Bentham Science Publisher]	2022-23			
Nitrogen containing fused heterocycles : Organic synthesis and applications as a potential anticancer agents , Current organic chemistry journal	Dr. J. K. Gunjate	Current organic chemistry journal [Bentham Science Publisher]	2022-23			
Beta-Cyclodextrin Encapsulated Inclusion Complex of Isatin Phenylhydrazone: Spectroscopic, Stoichiometric, Thermodynamic and	Ms. Prachi Khobragade	European Chemical Bulletin	2022-2023			

Biological profiles						
“Adsorption Mechanism Of Heavy Metal Ions On Granular Activated Carbon.”	Dr.V.R.K inhikar	IJFANS International Journal of Food and Nutritional Sciences	2022-23			

C. Faculty participation in conferences/seminars/workshops and symposia:

Name of the Faculty	Title of Conference/ Seminar/ workshop Attended	Period	Level International/ National/State /University /College	Whether Presented papers	Whether abstract /paper published in Souvenir/Abstract Book
DrR.U.Khope	Indian science congress held at RTM Nagpur University Nagpur	3 rd to 7 th Jan 2023	National	Nil	Nil
Prof Y. K Meshram	Indian science congress held at RTM Nagpur University Nagpur	3 rd to 7 th Jan 2023	National	Yes	Yes
	National Symposium on “Functional Materials for Sustainable Development” During 10-12 Oct, 2022	10-12 Oct, 2022 Organized NASI, with RTM Nagpur University, Nagpur	National	Yes	Yes
Dr P.S Utale	Indian science congress held at RTM Nagpur University Nagpur	3 rd to 7 th Jan 2023	National	nil	Nil
Dr.R.D.Urkude	Indian science congress held at RTM Nagpur University Nagpur	3 rd to 7 th Jan 2023	National	Yes	Yes

	International Conferences on Advances in material :Engineering and technology	,9 th Dec 2022	International	Yes	Yes
Dr.R.A.Deshmukh	Indian science congress held at RTM Nagpur University Nagpur	3 rd to 7 th Jan 2023	National	Yes	Nil
Dr. J. K. Gunjate	Indian science congress held at RTM Nagpur University Nagpur	3 rd to 7 th Jan 2023	National	Nil	Nil
Dr. V.R.Kinhikar	Indian science congress held at RTM Nagpur University Nagpur	3 rd to 7 th Jan 2023	National	Nil	Nil
Dr. V.R.Kinhikar	6 th International Science Young Scientist Congress(IYSC-23)	8 th and 9 th May 2023.	International	Yes	Yes
Dr. V.R.Kinhikar	National Symposium on “ Functional Materials for Sustainable Development”	10 th Dec 2022	National	Yes	Yes
Dr.P.N.Deshmukh	Indian science congress held at RTM Nagpur University Nagpur	3 rd to 7 th Jan 2023	National	Yes	Yes
	ICIWEGESF-2023	10th to 11th March 2023	International	Yes	Yes
Ms. Prachi Khobragade	Indian Science Congress held at RTM Nagpur University Nagpur	3 rd to 7 th Jan 2023	National	Yes	Yes
Dr. Shubhangi J. Kene	MS-DEED workshop	17 th -19 th 2023	National	-	participation
Dr. Shubhangi J. Kene	ISCA	3 rd -7 th 2023	National	yes	Poster presentation

Dr. Shubhangi J. Kene	International conference on innovations in science, Hybrid Materials and Vibration Analysis	16-17th July 2022	International Conference	yes	Best paper Award
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D. Awards to Faculty members

Name of Teacher	Title of the Award	Title of Agency/ Conference	National / International
Dr. V.R. Kinhikar	Best Researcher Award	S.S.E.S. Amt's Science College Congress Nagar, Nagpur.	National

6. Number of functional MoUs with institutions, other universities, industries, corporate houses, etc. during the year

The organization with which MoU is signed	Year of signing MoU	Duration	List the actual activities under each MOU year wise	Number of students/teachers who participated under MoUs

7. Research funds sanctioned and received from various agencies, industries and other organizations

Nature of the Project	Duration	Name of funding Agency	Amount Sanctioned	Amount Received

8. Books Published

	Book		Book Edited
	Title	ISBN and Date	Chapter
Dr. V.R. Kinhikar	Green Energy Strategies Towards Sustainable Development for Environment and Society.	ISBN: : 978-81-959050-0-3 Pub. Date: 31/01/2023	Fern International Publication, Pune
Dr Sarang S. Dhote	An Advance Tool for Qualitative Analysis of Heavy Metal in Thin Layer Chromatography.	978-93-90863-72-3, Page No. 46-49. Pub. Date – 25/03/2023	Recent Trends in Biotechnology and Applied Chemistry
Dr. Sarang S.	Pocket Handbook ,	ISBN : 978-93-	

Dhote	Ethnobotany: Floristics, Alladoh Campus Arts, Science And Commerce College Chikhaldara, ,	5913-163-4 24/04/2023	
Dr.P.N.Deshmukh	Environmental impact of Novel Schiff Base	ISBN-978-81- 963506-0-4	

9. Research Guidance by Faculty during the year

Name of the guide	Ph.D		
	Awarded	Submitted	Registered
Dr.Rashmi Urkude			02
Dr. J. K. Gunjate			02
Dr.V.R.Kinhikar			03
Dr.P.N.Deshmukh			02
Dr. Y.K.Meshram			01

10. Generation of funds through internal and external sources such as donations, consultancy, self-financing courses and so on.

Name of the nongovernment funding agencies/ individuals/ self-financing courses /consultancy service.	Purpose of the Grant/Fund	Fund generated in rupees.
IARP,BARC,Mumbai	State Level Workshop	Rs.25,000/-
Consultancy Services - Distribution of Advanced Water Testing Kit	Distribution of water Testing kit	Rs. 22,000/-

11. Alumni Engagement

- a. Contributes significantly to the development of the institution through financial and other supports.

11. Action Plan of the Department

- To organize poster ,quiz and curriculum related competitions.
- To enhance research publications in national and international Journal.
- To form linkages with National Laboratories like NCL,IICT Hyderabad.
- To arrange the lecturers of eminent scientists and Professor.
- To encourage UG and PG student for research.
- To organize conferences and seminars.
- To celebrate scientific days like Ozone days, world water day, Antidrug day.
- To synthesize the drugs, dyes and adsorbents for betterment of life.

- To arrange the skilled based training programmes required by Industries.

13. Best Practices of the department

- Launch of "Rasayanwani" Internet Radio Station by Shri Shivaji Science College Chemistry Department
 - Department of Chemistry Launches Innovative E-Library Resource "रसग्रंथालय".
 - Chemistry Department Pioneers Gamified Learning with "Chem Game".
 - Report: Welcome to ATL (Any Time Laboratory) - Revolutionizing Scientific Learning.
 - Chemistry Department Launches Online Climate Clock Platform.
 - Chemistry Department Develops Advanced Water Testing Kit for Field Studies.
- Counseling to slow learner.
 - Provided Question Bank as per university pattern.
 - Conducted test on all unites as per university pattern.
 - Digitalization of entire documents / records.
 - Celebration of national science day.
 - Celebration of Teacher day.

14. SWOT Analysis

• **Strength:**

- Well Qualified, Competent and Experienced Staff.
- Self financing PG Course.
- Well quipped Laboratories.
- Number of options available with chemistry subject.
- Department is under CPE.
- Certificate course in environmental Analysis.
- Regular seminars, personality development, guest lectures and awareness programs.
- Laboratory is recognized for higher learning and research.
- Five faculties are supervisors.
- Remedial teaching to slow learners.
- NET/SET coaching centre.
- Four National Conferences are organized.

➤ **Weakness :**

- Average student seek admission in the subject.

- Research on social oriented problems.
- The gap between the industrial demand and curriculum.

➤ **Opportunities :**

- Employment potential for M.Sc. Student in chemical/ pharma companies.
- Student faculty exchange programme.
- Upcoming industries in MIHAN.
- Upcoming textiles Zone nearby Nagpur.
- To establish collaboration and Consultancy Services.
- To undertake interdisciplinary research having social relevance.
- Students can pursue research leading to Ph.D.

➤ **Threats :**

- Rapid technological changes.
- Strong competitors.
- Heavy academic burden.
- Less financial support by the State and University.
- Stagnant state investment in higher education.

Date:

Head of the Department

