

Shri Shivaji Education Society Amravati's
Science College, Congress Nagar, Nagpur

Internal Quality Assurance Cell

DEPARTMENT OF CHEMISTRY

INTERNAL ACADEMIC AUDIT

2021-2022

1. A. Faculty Strength:

Faculty	Recruited	Vacant	Remarks
Regular	UG=09,PG=1	03	
CHB	03	--	
Ad-hoc	03	--	
Non-teaching	08	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	29Years
2. Prof. P. S Utale	M. Sc,Ph. D.	Professor	Organic Chemistry	22 Years
3. Prof. Y. K Meshram	M. Sc, SET, Ph. D.	Professor	Organic Chemistry	26 Years
4. Prof. J. K Gunjate	M. Sc, SET, NET, Ph. D.	Professor	Organic Chemistry	18 Years
5. Prof. R. D Urkude	M. Sc, Ph. D.	Professor	In-Organic Chemistry	16 Years
6. Prof. R. A Deshmukh	M. Sc, Ph. D.	Professor	Organic Chemistry	16 Years

7. Dr. S. S. Dhote	M.Sc Ph.D	Assistant Professor	Organic Chemistry	12 Years
8. Dr. Priyadarshani N. Deshmukh	M. Sc, Ph. D	Assistant Professor	Organic Chemistry	4 Years
9. Dr. Vrushali Kihikar	M. Sc, Ph. D	Assistant Professor	Organic Chemistry	13 Years
10. Dr. Shubhangi J. Kene	M. Sc, Ph. D	Assistant Professor	Analytical Chemistry	2 Years

2. Student's strength

Year	Group	Number of Students Admitted
B.Sc. Semester I	PCM	54
	CZM	35
	CBM	32
	CBZ	51
	CBG	22
	CGM	17
	PCG	19
	CMBT	76
	Total	306
B.Sc. Semester III	PCM	54
	CZM	40
	CBM	26
	CBZ	52
	CBG	26
	CGM	17
	PCG	17
	CMBT	81
	Total	313
B.Sc. Semester V	PCM	50
	CZM	28
	CBM	30
	CBZ	46
	CBG	19
	CGM	17
	PCG	22
	CMBT	84
	Total	296
M.Sc.Semester I		27
M.Sc.Semester III		22

Ph.D.		08
Value Added Program		

3.Student Performance

A. Result Analysis (Winter 2021) UG

Programme Name	Number of students who appeared in the final year examination	Number of students who passed in final year examination	Pass Percentage
B.Sc I st Yr.	B.Sc Sem I	301	98.04
B.Sc II nd Yr.	B.Sc Sem III	311	99.67
B.Sc III rd Yr.	B.Sc Sem V	301	100

B. Result Analysis (Winter 2021) PG

Programme Name	Number of students who appeared in the final year examination	Number of students who passed in final year examination	Pass Percentage
M.Sc. I st Year	M.Sc Sem I	26	100
M.Sc. II nd Year	M.Sc Sem III	26	100

C. Result Analysis (Summer 2022) UG

Programme Name	Number of students who appeared in the final year examination	Number of students who passed in final year examination	Pass Percentage
B.Sc I st Yr.	B.Sc Sem II	278	92.35
B.Sc II nd Yr.	B.Sc Sem IV	309	100
B.Sc III rd Yr.	B.Sc Sem VI	318	100

D. Result Analysis (Summer 2022) PG

Programme Name	Number of students who appeared in the final year examination	Number of students who passed in final year examination	Pass Percentage
M.Sc. I st Year	M.Sc Sem II	26	100
M.Sc. II nd Year	M.Sc Sem IV	22	96

E. Achievements

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

Sr.No.	Name of the Students	Class	Title
1.	Mr. Vishal Kharchwal	M.Sc.-I Year	Best debate award by RTM Uni .30/10/21
			First prize in state level debate competition organized by Science Colege Rajura13/01/22
			Third prize in state level debate competition organized by V,Naik College 20/02/22
			Second State level Intercollegiate Prize in Elocution competition organized by Vidhyabharti Mahavidyalaya, Amravati , 5/03/22
			Second Intercollegiate Prize in Elocution competition organized by Binzani Womens College 12/04/2022
			Third Intercollegiate Prize in debate competition organized by Hisloh College Nagpur 13/04/22
			First Prize in Intercollegiate debate competition organized by S.R.Rathi Science College Washim 16/04/2022

			Second Prize in Elocution competition organized by Shivaji Science College Akola
2	Mr. Akshay Bhatkulkar	B.Sc Sem IV	Third Prize in Intercollegiate Seminar competition organized by Science College Nagpur,01/4/2022
3	Ms. Triveni Fulkar	M.Sc.-I Year	Third Prize in National level Cross-word competition organized by Dept of Chem, Elphinstone college, Mumbai 21/3/2022

B- Merit Position of UG Students in RTMNU

Sr. No.	Name of the Students	Merit Position

C- Merit Position of PG Students in RTMNU

Sr. No.	Name of the Students	Merit Position
1.		

4. Student's Progression:

No. of students enrolling in higher Education		Name of institution joined	Name of program admitted to
UG to PG	31	Given in Annexure	M.Sc.
PG to Research	02	Science College Congress Nagar Nagpur	Ph.D
Placement	-	-	-
On-Campus	10	Given Annexure	-
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
1	Mr.Nikhil Tonge M.Sc.II	International Conference on “New Horizon and Trends in Chemical Sciences (ICNHTCS-2022) 25-26 March-2022	Paper Presented

(iii) Students' Extension Activity/ Extracurricular activity

Sr. No.	Name of the activity	The number of students Participated
1.	Joy of Giving (10/3/2022)	25
2	Ecofriendly Colors (16/3/2022)	65
3	Intercollegiate Seminar Competition(1/4/2022)	Participation of 13 Colleges (13 Students)
4	Guest Lecture Prof N.N.Karde(28/4/2022)	50
5	International Ozone Day (16/9/2021)	124
6	Sapling Distribution (12/10/2021)	23

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

Sr. No.	Name of the Students	MOOCs / NPTEL/ SWAYAM

5. Faculty

I. Research Paper Publications

A. Total Number of publications:

- i) International 05
- 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	Number of citations excluding self-

					publication	citation
“Surface Technology-adsorption and kinetic of heavy metal ions on modified GAC by batch study and their recovery study”	Dr.Vrushali Kinhikar 21-22	IOP Publishing (Journal of Physics)doi:10.1088/1742-6596/1913/1/012089. (Scopus)	2021		S.S.E.S Amt’s Science College, Nagpur 440012, (M.S) India	Total citations 48
“Recovery and Reuse of Adsorbed Heavy Metal Ions by Adsorption Technology”	Dr.Vrushali Kinhikar 21-22	Journal of Scientific Research of The Banaras Hindu University. Volume 65, Issue 8, 2021 101-105 2021 UGC Care	2021		S.S.E.S Amt’s Science College, Nagpur 440012, (M.S) India	
“Recovery of Adsorbed Metal ions from the Granular Activated Carbon”, A Multidisciplinary International Level Referred and Peer Reviewed Journal, Impact Factor-7.265, ISSN: 2230-9578, 20 July-2021, Volume-11, Issue-26.	Dr.Vrushali Kinhikar 21-22	'Journal of Research & Development', AMultidisciplinary International Level Referred and Peer Reviewed Journal, Impact Factor-7.265, ISSN: 2230-9578, 20 July-2021, Volume-11, Issue-26. (Peer reviewed)	2021		S.S.E.S Amt’s Science College, Nagpur 440012, (M.S) India	
Deltamethrin Pesticides Residues: Extraction by QuChERS Method and analysis by GC-MS/MS	Dr.Rashmi Urkude	International Journal of Scientific Reseach In Science And technology.ISSN No.2395-602X.Vol 9,Issue-6,pp 85-99 (Peer reviewed)	2021		S.S.E.S Amt’s Science College, Nagpur 440012, (M.S) India	Total Citations =61
Residue Analysis of Deltamethrin Indecticide In Soil by QuChERS Extraction	Dr.Rashmi Urkude	International Journal of Current Science.ISSN No.2250-1770,Vol 2,Issue 1 (Peer reviewed)	Feb 2022		S.S.E.S Amt’s Science College, Nagpur 440012, (M.S) India	

Method Combined With GC-MS/MS						
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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
Dr.V. R. Kinhikar 21-22	One Day Interdisciplinary Online International Conference on "Environmental Changes, Biodiversity, and Sustainable resource Management", "Recovery of Adsorbed Metal ions from the Granular Activated Carbon", on 10th September	Santosh Bhimrao Patil Arts,Commerce and Science College Mandrup,Dist.Solapur.	International Conference	Yes	Abstract

	International Conference on Research Frontiers in Sciences (ICRF-2021)online , organized by G.H.Raisoni College of Engg.	5-6th February 2021.	International	No	Yes
	International Conference on New Horizons and Trends in Chemical Sciences(ICNHTCS-2022) “Adsorption & Kinetics study of Heavy metal ions Using Porous Activated Carbon” 25/03/2022 to 26/03/2022	Dada Ramchand Bhakru Sindhu Mahavidyalaya,Nagpur,in Association with ASNS.	International Conference	Yes	Abstract
	National Level One –Week Faculty Development Programme on Research Methodology 26 th April to 1 st May 2021	Organized by Kamla Nehru Mahavidyalaya ,Nagpur	FDP	National	NA

	MS-DEED Level 1 Online Workshop on Introduction to Innovative Pedagogies for Science & Mathematics Undergraduate Teachers from 21 st to 23 rd December 2021	IISER,Pune.	Pune (Online mode)	Certificate not received yet Mail copy is attached	
	National Seminar on Impact of Covid-19 on Mental, Physical Health, Replications and Remedies 25 th May 2021	Priyadarshini Mahila Mahavidyalaya, War dha	Seminar	National	NA
Prof. Y. K. Meshram	International Conference on New Horizons and trends in chemical Sciences., "Relevance of Isotherm Models in adsorption of heavy metals by using low cost adsorbent"	25 th to 26 th March 2022	Conference	Yes	Abstract
Dr. R. A. Deshmukh	International Conference on New Horizons and trends in chemical Sciences at Dada Ramchand Bakhru Sindhu Mahavidyalaya, Nagpur, "Synthesis, benzoyl derivatives and biological activity of some novel 1,2,4,5-tetrazines."	25 th to 26 th March 2022	Conference	Yes	Abstract

	International Conference on Science and Technology for Society,"Synthesis, Characterization and Biological evaluation of newly synthesized Schiff Bases.	19 & 20 th June 2022 Goa	Conference	Yes	Abstract
Dr. P. N. Deshmukh	International Conference on New Horizons and trends in chemical Sciences at Dada Ramchand Bakhru Sindhu Mahavidyalaya, Nagpur, "Synthesis, benzoyl derivatives and biological activity of some novel 1,2,4,5-tetrazines."	25 th to 26 th March 2022	Conference	Yes	Abstract
	International e-Conference Innovation in Science, Technology, Humanities, Management and e-Commerce, Anandwan,	14 & 15 th March	Conference	Yes	Abstract
	International Conference on Science and Technology for Society,"Synthesis, Characterization and Biological evaluation of newly synthesized Schiff Bases.	19 & 20 th June 2022 Goa	Conference	Yes	Abstract
Dr. S. J. Kene	International Workshop (online) on Research Insights in scientific Writing and Publication (RISWP-2021) Dept. Microbiology and Biotechnology, Shri Shivaji Science College, Nagpur	17 & 18 th December	Workshop	NA	NA

	One week National Level online workshop” Drafting Research Publication, Funding Proposal & Ethical Conduct Of Research” R.T.M. Nagpur university, Nagpur	17-18th Feb	Workshop	NA	NA
	International Conference on Integrated Approach in S & T Sustainable Future (ICIASTSF)-2022 Dr. Ambedkar college and seth Kesarimal Porwal College	26-27 th Feb	Conference	NA	NA
	International Conference on New Horizons and Trends in Chemical Sciences (ICNHTCS)-2022 Dada Ramchand Bakhru Sindu Mahavidyalaya , Nagpur	25-26 th Mar	Conference	NA	NA
Dr. Rashmi Urkude	International Conference on New Horizons and Trends in Chemical Sciences (ICNHTCS)-2022 Dada Ramchand Bakhru Sindu Mahavidyalaya , Nagpur	25 th -26 th March	Conference	Yes	Abstract
Dr. Reshal Deshmukh	International Conference on New Horizons and trends in chemical Sciences at Dada Ramchand Bakhru Sindhu Mahavidyalaya, Nagpur, ”Synthesis, benzoyl derivatives and biological activity of some novel 1,2,4,5-tetrazines.”	25 th to 26 th March 2022	Conference	Yes	Abstract

	International Conference on Science and Technology for Society,"Synthesis, Characterization and Biological evaluation of newly synthesized Schiff Bases.	19 & 20 th June 2022 Goa	Conference	Yes	Abstract
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Scopus=03,UGC CARE=01,Peer Reviewed=01

D. Awards to Faculty members

Name of Teacher	Title of the Award	Title of Agency/ Conference	National / International
Dr. V. R. Kinhikar	Best Women Researcher Award	2021 IJIEMR ELSEVIER SSRN	2021

Patent Publication

S. No	Patent Title	Name of Applicant(s)	Patent No.	Award Date	Agency/ Country	Status
1	Fluid Catalytic Cracking(FCC)Process Method For Manufacturing Propylene and Ethylene	Dr.V.R.Kinhikar	202221011378	18/03/2022	India	Published
2	Producing Biodiesel From Oleaginous seeds.	Dr.V.R.Kinhikar	202241007316	04/03/2022	India	Published

Copyrights

Sr.No.	Name of Faculty	Title of Work	Date and number Certificate	Name of Agency	Country
1	Dr.S.Dhote	Interactive android application for Museums and	21/04/2022 & No- SW-15394/2022	Copyright office Government	India

		Forest		of India	
2	Dr.S.Dhote	Android application – G Mapping and conservation of Endangered Plant Species.	21/04/2022 & No- SW- 15393/2022	Copyright office Government of India	India

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
1.	Talking tree: an interactive tool for Environmental sustainability Sarang S. Dhote	ISBN: 978-93-91768-29-4 Date 12/01/2022	Chapter
2	G- mapping: plantation, conservation,	ISBN: 978-93-91768-29-4 Date 12/01/2022	Chapter

	regular Monitoring, and awareness of plants Sarang S. Dhote and Rahul G. Sawarkar		
3.	Drinking water Contamination and health implication with respect to Fluoride and pesticides in Maharashtra State ,India In Science Of Environment.	ISBN:978-81- 955557-1-0. Date:2022	Chapter

9. Research Guidance by Faculty during the year

Name of the guide	Ph.D		
	Awarded	Submitted	Registered
Prof R.U.Khobe and Dr V.Kinhikar	-	-	02
Prof.R.A.Deshmukh	-	-	01
Prof.R .D. Urkude	-	-	02
Prof J.K.Gunjate	-	-	02
Dr. P.N.Deshmukh	-	-	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.
Nil		

11. Alumni Engagement

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

Dr Sarang Dhote , the faculty and alumnus of our department developed kit for water analysis for Certificate Course in Environmental Analysis

12.Action Plan of the Department

- To organize conferences and seminars.
- 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 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

- 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.
- Staff members were involved in campus cleaning, Sponsored medals / awards by the faculty.

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:
Department

Head of the

Skill based Certificate course
Environment and water management
2022-2023

1. Renuka S Ayyagari
2. Garima W Chandokar
3. Shravani N Saraf
4. Om S Bokase
5. Aditya B Wadibhasme
6. Sanjana S Jangade
7. Sanchit M Joshi
8. Diksha R Gedam
9. Ambaleena A Dhoke
10. Raj S Sonone
11. Srushti Karki
12. Laxmi K Timande
13. Janavi P Choudhari
14. Vikas Bunde

Dr.Rashmi Urkude

Dept. of Chemistry

2021-2022

Internal Academic Audit

2021-2022

- 1) Audit Report
- 2) Departmental Activities/ extra-curricular activities
- 3) Research papers
- 4) Any others/ placement, MOOCS, SWAYAM,NPTEL
- 5) Projects/ Workshop
- 6) Students achievements/students progression