Kasegaon Education Society's

Arts and Commerce College, Kasegaon

DEPARTMENT OF CHEMISTRY

A. INTRODUCTION -

The department of chemistry is involved in both teaching and research. In teaching the Department is training the next generation students and an enable them to lead the nation in chemistry. The training received by the students enabled them to achieve major position in industry, research and academic institution.

The Department of Chemistry was established in 2020 with 61 students.

B. GOALS AND OBJECTIVES OF CHEMISTRY DEPARTMENT -

- Graduates from our program will possess a strong foundational knowledge of modern inorganic, organic, physical and analytical chemistry.
- 2) Students will demonstrate scientific understanding of the structure of matter and of its physical and chemical transformations.
- 3) Graduates from our program will be proficient in applying modern laboratory methods and technological tools to the studies of chemical system. And apply standard laboratory techniques to carry out qualitative and quantitative analysis, chemical synthesis, characterization of compounds and measurement of chemical reactivity.

- 4) Students will learn the theoretical bases, operating principles and an experimental uses of scientific instrumentation and software application and will apply these technologies appropriately to study chemical system.
- 5) Students will access, search, evaluate and critique the primary scientific literature.

C. Teaching Faculty

2020-21

Sr. No.	Name of faculty	Qualification	Designation	Age	Experience (Years)
1	Smt. P. A. Shaha	M.Sc. B.Ed	Assistant Professor	36	2

2021-22

Sr. No.	Name of faculty	Qualification	Designation	Age	Experience (Years)
1	Smt. P. A. Shaha	M.Sc. B.Ed	Assistant Professor	36	2
2	Miss. R. R. Nalawade	M.Sc.	Assistant Professor	23	1

2022-23

Sr. No.	Name of faculty	Qualification	Designation	Age	Experience (Years)
1	Smt. P. A. Shaha	M.Sc. B.Ed	Assistant	36	2
'	Silit. F. A. Silalia	WI.SC. D.Lu	Professor	30	2
2	Miss. R. R. Nalawade	M.Sc.	Assistant	23	1
~	IVIISS. N. N. INdiawaue		Professor	23	
3	Miss. B. G. Shaikh	M.Sc.	Assistant	22	
٥	iviiss. b. G. Shaikh	IVI.SC.	Professor	ZZ	-

2023-24

Sr. No.	Name of faculty	Qualification	Designation	Age	Experience (Years)
1	Smt. P. A. Shaha	M.Sc. B.Ed	Assistant Professor	36	2
2	Miss. R. R. Nalawade	M.Sc.	Assistant Professor	23	1
3	Miss. B. G. Shaikh	M.Sc.	Assistant Professor	22	-

D. Allocation of Work load

Sr.		Periods			
No.	Name of Faculty	Class	Theory	Practical	Total
		B.Sc-I	02	04	06
1.	Smt.P.A.Shaha	B.Sc-II	02	03	05
		B.Sc-III	07	04	11
Total Work load per week					22

Sr.	Name of Esculty	Faculty Class		Periods		
No.	No. Name of Faculty		Theory	Practical	Total	
	Miss.R.R. Nalawade	B. ScI	02	04	06	
2.		B. ScII	02	03	05	
		B. ScIII	06	04	10	
Total Work load per week					21	

Sr.	Name of	f Eagu	l4v,	Class	Periods		Total
No.	Name of	гаси	ıty	Class	Theory	Practical	Total
				B. ScI	01	04	05
3.	Miss. Shaikh	B.	G.	B. ScII	02	02	04
			B. ScIII	07	04	11	
Total Work load per week						20	

E. Teaching Plan and Methods

Department of Chemistry uses following teaching methods

Lecture method-

This method is most commonly used in colleges which are useful to teach the subject. In this teaching method, students assume the role of teacher and teach their peers. By having students participate in the teaching process, they gain self-confidence and strengthen their speaking and communication skills.

Demonstration method

Demonstrating is the process of teaching through examples or experiments. For example, a science teacher may teach an idea by performing an experiment for students. A demonstration may be used to prove a fact through a combination of visual evidence and associated reasoning. Demonstrations help to raise student interest and reinforce memory retention because they provide connections between facts and real-world applications of those facts. Lectures, on the other hand, are often geared more towards factual presentation than connective learning.

❖ Seminar method

In this method student present their topic under the guidance of their teachers. These seminars are helpful to the students in seeking more defensible solutions before the audience and for getting more knowledge about that particular topic.

❖ Group Discussion

These are planned to ensure development of creative and critical abilities of the students. Under this method students are supplied the particular topic in advance. A few students are selected to initiate discussion about the topic.

These students are expected to answer a question about the topic raised by other students.

❖ ICT Based Teaching:

In this method, the teachers prepare PPT presentations, Models presentations and Charts to elaborate the major points in the syllabus. The students are provided with certain topics which they are supposed to search engines like Google, Chrome, etc.

Laboratory method

In this method students do the experiments under the guidance of the teacher. By this method students get scientific awareness, motivation towards self - study, self -confidence etc. For making teaching, learning process more effective by above method our department use teaching aids such as charts, models, OHP, LCD etc.

H. Examination Schedule.

As per rules and regulation of Shivaji University, Kolhapur; conduct two unit test, projects etc.

I. Built up area with map of Department:

Map of the department with dimensions is separately attached .Total carpet area of the department = **208.85 sq. meter.**

J. Total expense for Chemistry laboratory

Year 2020 - 2021

Chemicals and equipment's - 7, 39,933 = 00

Furniture -73,000 = 00

Maintenance - 10,425 = 00

Year 2021 - 2022

Chemicals -3, 63,961 = 00

Equipment's -6, 13, 159 = 00

Year 2022 - 2023

Chemicals -1, 48, 605 = 00

Equipment's -1, 35,169 = 00

K. List of Instruments

Sr.No.	Instruments Name	Dealers Name	Date of Purchase	Quantity	Amount
1	Conductometer	Samarth Trading, Islampur	Aug 2021	2	
2	Polarimeter	Samarth Trading, Islampur	Aug 2021	1	
3	Abbe's Refractometer	Samarth Trading, Islampur	Aug 2021	1	
4	Potentiometer	Samarth Trading, Islampur	April.2022	1	
5	Magnetic stirrer with hot plate	Samarth Trading, Islampur	April.2022	2	
6	Suction pump	Samarth Trading, Islampur	April.2022	1	

7	Chromatographic jar	Samarth Trading, Islampur	April.2022	12	
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L. List of Chemicals

Sr.No.	Name of chemical	Company	Unit	Quantity
1	Ferrous ammonium sulphate	Loba	500 gm	1
2	Barium sulphate	Loba	500 gm	1
3	Methyl red indicator powder	Loba	100 gm	1
4	Ammonium sulphate	Loba	500gm	1
5	Ammonium oxalate	Loba	500gm	1
6	Zinc nitrate	Loba	500gm	1
7	Cadmium chloride	Loba	250gm	1
8	Cadmium nitrate	Loba	250gm	1
9	Chromium chloride	Loba	250gm	1
10	Mangnese sulphate	Loba	500gm	1
11	Mangnese chloride	Loba	500gm	1
12	Aluminium sulphate	Loba	500gm	1
13	Zinc carbonate	Loba	500gm	2
14	Magnesium Sulphate	Loba	500gm	2
15	Magnesium carbonate	Loba	500gm	2
16	Ammonium nitrate	Loba	500gm	2
17	Ethyl benzoate	Loba	500gm	1
18	Iodine	Loba	500ml	1
19	Potassium Chloride	Loba	500gm	1
20	Phthalic anhydride	Loba	500gm	2
21	Urea	Loba	500gm	2
22	Benzamide	Loba	500gm	2
23	Benzene	Loba	500ml	2
24	Toluene	Loba	500ml	1
25	Xylene	Loba	500ml	1
26	Succinic acid	Loba	500gm	1
27	Phthalic acid	Loba	500gm	1
28	Salicylic acid	Loba	500gm	1
29	Aspirin	Loba	500gm	1
30	Alpha-naphthol	Loba	500gm	1
31	O-nitrophenol	Loba	500gm	1
32	P-nitrophenol	Loba	500gm	1
33	o-nitroaniline	Loba	500gm	1
34	p-nitroaniline	Loba	500gm	1
35	m-nitroaniline	Loba	500gm	1

36	Diphenyl amine	Loba	250gm	1
37	Carbon tetrachloride	Loba	500ml	5
38	Naphthalene	Loba	500m	1
39	Anthracene	Loba	250gm	1
40	Acetophenone	Loba	500ml	1
41	Ethyl methyl ketone	Loba	500ml	1
42	Nitrobenzene	Loba	500ml	2
43	Clay pipe triangle	Loba		30
44	Rubber pipe for condenser	Loba		100 feet
45	Whatmann filter paper No.40	Loba		2 packets
46	Digital conductometer with conductivity	Equiptronics		1
40	cell having cell const (1)	Equiptionics		1
47	Viscometer	Borosil		6
48	Refractometer Abbes	Rajdhani		1
49	Digital Polarometer	Equiptronics		1
50	TLC set			1
51	Potassium per sulphate	Loba	500 gm	1
52	Calcium carbonate	Loba	<u>500 gm</u>	2
<u>53</u>	Triethanolamine	Loba	<u>500 ml</u>	1
<u>5</u> 4	Silica crucible for gravimetry			24
55	Desicator glass	Borosil		6
56	Barium nitrate	Loba	500gm	1
57	Nickel nitrate	Loba	500gm	1
58	Potassium chloride	Loba	500gm	2
59	Watchglass	borosilicate		12
60	Specific gravity bottles for refractometry			12
61	Barium chloride	Loba	500gm	1
62	Aluminon	Loba	250gm	1
63	Alizarin	Loba	250gm	1
64	Alpha nitroso beta naphthol	Loba	250gm	1
65	Dimethyl glyoxime	Loba	250gm	1
66	Benzidine	loba	250ml	1
67	Picric acid	Loba	500gm	1
68	Nessler's reagent	Loba	250 gm	1
69	Magneson-I reagent	Loba	250gm	1
70	Mercuric chloride	Loba	250gm	1
71	Ammonium thiocyanate	Loba	250gm	1
72	Potassium Ferrocyanide	Loba	250 gm	1
73	Dithiozone	Loba	250gm	1
74	Cupron	Loba	250gm	1
75	Ammonium sulphocyanide	Loba	250gm	1
76	Stannous chloride	Loba	250gm	1
77	Rochelle salt(sodium potassium	Loba	250gm	1
	tartarate)			

M. Student Appearance

Sr.No.	Year	Class	Students Number
1	2020-2021	B.Sc I	61
2	2021-2022	B.Sc.I	45
		B.Sc.II	63
3	2022-2023	B.Sc.I	29
		B.Sc.II	38
		B.Sc.III	36
4	2023-2024	B.Sc.I	69
		B.Sc.II	27
		B.Sc.III	23

N. Student Progression

Sr.No.	Name of the	Name of the	Post	PG
	students	company		Student
1	Tate Pranali Mohan	Mahindra and	Assistant	
		Mahindra		
2	Shingare Aishwarya	Mahindra and	Assistant	
	Babaso	Mahindra		
3	Waghmode Ankita	Mahindra and	Assistant	
	Vikas	Mahindra		
4	Vhanmane Mahesh	Airtel	Area manager	
	Khandu			
5	Mane Darshan	ICICI Bank	Clark	
	Tanaji			
6	Patil Harshvardhan	Kirana store	Owner	
	Maruti			
7	Patil Swayam Vikas	Shubham	Owner	
		automobiles		
8	Shinde Rushikesh	Home occupation	worker	
	Mahadev			
9	Candidates	M. Sc; M. B. A.		10

O. Departmental Activities

Sr.	Year	Name of the event	Guest	Students
No.				presenty
1		Poster Presentation	Dr. C. S. Magdum	12
2	2020 - 2021	Medicinal plant exhibition	Dr. Aruna Patil	6
3		Quiz compitition	Online	30
4	2021 -2022	Medicinal plant		10
		exhibition		
5		Study tour	NIO Goa	40
6	2022 -2023	Digital spectroscopy	Site visit	10
7		Science bulletin	HOD	4
8		Workshop on soap	Dr. T. D. Patil -	33
		making	Dange	
	2023 -2024		Smt. S. J. Shinde	
9		Traning on making of	Dr. T. D. Patil -	6
		soap	Dange	
10		Study of Jaggery	Site visit	20
		manufacturing		

Personal Profiles of Faculty Members

DEPARTMENT OF CHEMISTRY

Teacher's profile

Name of the Teacher: Mrs. Pallavi Atulkumar Shaha

General Information

1) Name of the teacher: Mrs. Pallavi Atulkumar Shaha

2) Designation: Assistant Professor

3) College: Arts and Commerce College, Kasegaon.

4) Department: Chemistry5) Date of birth: 05/12/1986

6) Date of appointment: 01/01/20217) Total teaching experience: UG: 3

8) Permanent address: A/P. Kasegaon, Tal. Walwa, Dist. Sangli. Pincode – 415404

9) Mobile number: 9823189433, 9730032632

10) Email: pallavishaha2016@gmail.com

Academic Qualifications

Sr.	Qualification	University /	Subject	Year	Grade/
No		Board			Class
1	Ph. D/ M. Phil./	Shivaji		2022-	Appear
	SET/ NET	University		23	
2	B.Ed	Shivaji	Science and Maths	2015	First
		University			
3	M.Sc	Shivaji	Organic Chemistry	2018	First
		University			
4	B.Sc	Shivaji	Chemistry	2007	First
		University			
5	HSC	Kolhapur Board	Physics, Chemistry,	2004	First
			Biology		
6	SSC	Kolhapur Board	English, Maths,	2002	First
			Science		

Participation in College Committee

Sr.No.	Name of the committee	Designation
1	Internal Quality Assurance Cell (IQAC)	Teacher
		representative
2	Internal Women Complaints Committee	Member
3	NSS Committee	Member
4	Cultural Department and youth festival	Member
5	Admission Committee and Prospectus	Member
6	Lead College Committee	Member
7	Staff Welfare Academy	Member
8	Scholarship Committee	Member
9	Womens Association	Member
10	Science and Natures Club	Coordinator
11	Alumini and Parents Association	Member
12	Class – B.Sc.III (Chemistry)	Class teacher
13	Hostel Comittee	Coordinator

Research Activities

A) Attended Workshop/Seminar/ Conference / Webinar

Sr. No.	Title of Workshop Conference / Seminar	Date	Organized by	Whether international/ National / State or University level
1	Research methodology webinar	30/4/2020	Karmveer Bhaurao Patil college,Vashi,Navi Mumbai	National
2	One day National webinar on Frontiers in Chemistry	28/9/2020	Department of chemistry National institute of technology Karnataka	National
3	National Workshop for Net/Set paper I	26/9/2020 to 1/10/2020	Shivaji University ,Kolhapur Central placement cell	National
4	Webinar on Central and Government exams for U.G and P.G students.	2/12/2020	Shivaji University ,Kolhapur Central placement cell	National
5	Online workshop on Advanced CFD for Industrial Applications	15/12/2020 to 25/12/2020	Shivaji University ,Kolhapur Central placement cell	National

6	National workshop on	22/2/2021	GAD-TLC,SGTB	National
	ICT tools for Chemistry		khalsa college ,Delhi	
	teachers		University	
7	National webinar on	27/2/2021 to	Lt.Dr.B. Ajantha	National
	Film Literature and	28/2/2021	Parthasarthi	
	Research			
8	Two day online state	5/10/2021	Arts and Commerce	State
	level faculty		College Kasegaon	
	development program	То		
	on teaching, learning,	6/10/2021		
	evaluation and research	0/10/2021		
9	Recent Trends in Pure	24/3/2023	KRP Kanya	International
9	and Applied Science	24/3/2023	Mahavidyalaya,	memationar
	(ICRTPAS – 2023)	То	Islampur	
	(ICK11 AS - 2023)		Islampui	
		25/3/2023		
10	National intellectual	3/4/2023	Intellectual Property	National
10	property awareness	3/4/2023	Office, India	radional
	mission		Office, maia	
11	Teachers Training one	18/9/2023	Dr. Patangrao Kadam	State
	day workshop Newly		Mahavidyalaya,	
	Changed Syllabus of B.		Sangliwadi	
	Sc. II (Sem. III and IV)		C	
12	One day workshop for	3/2/2024	Shri Venkateshwara	State
	Net/Set paper I and		College of Science,	
	research awareness		Peth Sangli.	
13	National conference on	16/2/2024	DABN Arts and	National
	current scenario in		Science College,	
	Chemical and Material		Chikhali, Sangli	
	science			

B) Paper Presentation

Sr. No.	Title of paper	Title of Workshop Conference / Seminar	Organized by	Whether international/National / State or University level

C) Publication

Sr. No.	Title with page Nos.	Journal	ISSN / ISBN No.	Impact Factor, if any

D) Guest lecture /Invited Lecture/ Chairperson

Sr. No.	Title of Lecture / Academic Session	Title of Conference / Seminar etc	Organized by	Whether international/ National/ College

E Fellowships / Awards

Sr. No.	Fellowship / Award	Year	Level International / National / State / University	Awardee Academic Body/ Association

Signature

Name of the teacher: Miss. Radhika Ramchandra Nalawade

General Information

1) Name of the teacher: Miss. Radhika Ramchandra Nalawade

2) Designation: Assistant Professor

3) College: Arts and Commerce College, Kasegaon.

4) Department: Chemistry5) Date of birth: 07/05/1999

6) Date of appointment: 08/11/20217) Total teaching experience: UG: 2

8) Permanent address: A/P. 32 Shirala, Tal. Shirala, Dist. Sangli. Pincode – 415408

9) Mobile number: 9096524857

10) Email: radhikanalawade1@gmail.com

Academic Qualifications

Sr. No	Qualification	University / Board	Subject	Year	Grade /Class
	Ph. D/ M. Phil./ SET/ NET				
1	M.Sc	Shivaji University	Organic Chemistry	2021	First
2	B.Sc	Shivaji University	Chemistry	2019	First
3	HSC	Kolhapur Board	Physics, Chemistry, Maths	2016	First
4	SSC	Kolhapur Board	English, Maths, Science	2014	First

Participation in College Committee

Sr.No.	Name of the committee	Designation
1	Intuitional Avishkar Expert Committee	Member
2	Research and Development Cell	Member
3	Library Committee	Member
4	Study Tour Committee	Member
5	Feed Back Committee	Member
6	Career Katta	Member
7	Discipline and Code of Conduct Committee	Member

8	Placement Cell	Member
9	Science and Natures Club	Member

Research Activities

A) Attended Workshop/Seminar/ Conference

Sr. No.	Title of Workshop Conference / Seminar	Date	Organized by	Whether international/National / State or University level
1	Two day online state level faculty development program on teaching, learning, evaluation and research	5/10/2021 To 6/10/2021	Arts and Commerce College Kasegaon	State
2	Recent Trends in Pure and Applied Science (ICRTPAS – 2023)	24/3/2023 To 25/3/2023	KRP Kanya Mahavidyalaya, Islampur	International
3	National intellectual property awareness mission	3 rd April 2023	Intellectual Property Office, India	National

B) Paper Presentation

Sr. No.	Title of paper	Title of Workshop Conference / Seminar	Organized by	Whether international/National / State or University level

C) Publication

No.			No.	Factor, if any
Sr.	Title with page Nos.	Journal	ISSN / ISBN	Impact

D) Guest lecture /Invited Lecture/ Chairperson

Sr. No.	Title of Lecture / Academic Session	Title of Conference / Seminar etc.	Organized by	Whether international/National/College

E Fellowships / Awards

Sr. No.	Fellowship / Award	Year	Level International / National / State / University	Awardee Academic Body/ Association

Name of the Teacher: Miss. Banu Gudubhai Shaikh

General Information

1) Name of the teacher: Miss. Banu Gudubhai Shaikh.

2) Designation: Assistant Professor

3) College: Arts and Commerce College, Kasegaon.

4) Department: Chemistry5) Date of birth: 21/02/1998

6) Date of appointment: 01/09/2022

7) Total teaching experience: UG: 1 year 7 month

8) Permanent address: A/P. Nerle, Tal. Walwa, Dist. Sangli. Pincode – 415406

9) Mobile number: 9172248568

10) Email: shaikhbanu601@gmail.com

Academic Qualifications

Sr.	Qualification	University /	Subject	Year	Grade
No		Board			/Class
1	Ph. D/ M. Phil./				
	SET/ NET				
2	M.Sc	Shivaji	Physical Chemistry	2022	First
		University			
3	B.Sc.	Shivaji	Chemistry	2019	First
		University	-		
4	HSC	Kolhapur Board	Physics, Chemistry,	2016	First
		_	Biology		
5	SSC	Kolhapur Board	English, Maths,	2014	First
			Science		

Participation in College Committee

Sr.No.	Name of the committee	Designation
1	Internal Women Complaints(ICC) Committee	Member
2	Cultural Development and Youth Festival	Member
	Committee	

3	NSS Committee	Member
4	Essay, Elocution and Other Competition	Member
	Committee	
5	NIRF and RUSSA Committee	Member
6	Science and Nature Club	Member
7	Class- B.Sc .I	Class Teacher

Research Activities

A) Attended Workshop/Seminar/ Conference

Sr.	Title of Workshop	Date	Organized by	Whether
No.	Conference / Seminar			international/National/
				State or University level
1)	International conference on	$24^{th} - 25^{th}$	Smt. Kusumtai	International
	recent trends in pure and	March 2023	Rajarambapu Patil	
	applied sciences 2023		Kanya	
			Mahavidyalaya	
			,Islampur .	
2)	National intellectual	3 rd April 2023	Intellectual	National
	property awareness		Property Office,	
	mission		India	

$B) \ \hbox{Paper Presentation}$

Sr. No.	Title of paper	Title of Workshop Conference / Seminar	Organized by	Whether international/National / State or University level

C) Publication

Sr. No.	Title with page Nos.	Journal	ISSN / ISBN No.	Impact Factor, if any

D) Guest lecture / Invited Lecture / Chairperson

Sr.	Title of	Title of	Organized	Whether
No.	Lecture / Academic Session	Conference / Seminar etc	by	international/National/ College

E) Fellowships / Awards

Sr.	Fellowship / Award	Year	Level	Awardee Academic
No.			International /	Body/ Association
			National / State	
			/ University	

Signature