

DEPARTMENT OF CHEMISTRY

Programme Run by the Department of Chemistry: **B.Sc. Chemistry**

Established in: **2000**

Faculty of the Department of Chemistry:



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PROGRAMMES AND COURSES OF THE DEPARTMENT

Courses for B.Sc. Chemistry:

Class	Course Code	Course/ Paper	Title of the Paper	Credits	Syllabi Link
FYBSc	CH-101 and 102	Core Course	Physical and Inorganic Chemistry	2+2 = 4	(Implementation Academic Year -2022-23) https://nmu.ac.in/Student-Corner/Academics/Syllabi
	CH-201 and 202	Core Course	Physical and Inorganic Chemistry	2+2 = 4	
	CH-103 and 203	Chemistry Practical	Chemistry Practical	2+2 = 4	
	CH-301 and 401	Core Course	Physical and Inorganic	2+2=4	

SYBSc	CH-302 and 402	Core Course	Chemistry Physical and Inorganic Chemistry	2+2=4	(Implementation Academic Year- 2019-20) https://nmu.ac.in/Student-Corner/Academics/Syllabi
	CH- 303 and 403	Chemistry Practical	Chemistry Practical	2+2=4	
	CH-304 and 404	Skill Enhancement Course	Basic Analytical Chemistry and Advanced Analytical Chemistry	2+2=4	
TYBSc	CH-501 and 601	Core I	Principles of Physical Chemistry-I and II	3+3 =6	(Implementation Academic Year- 2020-21) https://nmu.ac.in/Student-Corner/Academics/Syllabi
	CH-502 and 602	Core II	Inorganic Chemistry And Chemistry of Inorganic Solids	3+3 =6	
	CH-503 and 603	Core III	Organic Reaction Mechanism and Spectroscopic Methods of Structure Determination	3+3 =6	
	CH-504 and 604	Core IV	Industrial Chemistry and Chemistry of Industrially Important Products	3+3 =6	
	CH-505 and 605	Skill Enhancement Course	Analytical Instrumentation and Analytical Techniques	3+3 =6	
	CH-506 (A) and 606(A)	Elective	Biochemistry and Polymer Chemistry	3+3 =6	
	CH-507 and 607	Core course (Practical)	Physical Chemistry Practical	2+2 =4	

CH- 508 and 608		Inorganic Chemistry Practical	2+2 =4	
CH-509 and 609		Organic Chemistry Practical	2+2 =4	
AC-510/ AC-611	Non-Credit Audit Course	NSS/ Yoga	No Credit	

RESULT OF THE DEPARTMENT (BSc Chemistry)

Year	Number of Last Year Admitted Student	BSc Chemistry Passed Student	Name of the Student who came first in the Department
2017-18	55	05	Deore Dipak Sanjay
2018-19	38	19	Deore Vaishnavi Bhausheb
2019-20	69	66	Khairnar Harshada Arvind
2020-21	70	68	Bhamare Bhavana Ramdas
2021-22	88	82	Chavan Swati Babu
2022-23	71	22	Khairnar Pratiksha Sanjay

ACTIVITIES OF THE DEPARTMENT OF CHEMISTRY

Department Activity

The Department of Chemistry celebrates National Science Day by organizing poster presentation or quiz competition of all the students of Chemistry.

Industrial Tour

Department Organized industrial tour every year to develop the applied knowledge of chemistry of the students and field work. And motivate students to write the project report.

Chemistry Ability Test (CAT)

The Department of Chemistry organizes CAT every year to develop the knowledge and aptitude of chemistry of the students.

WEBINAR, SEMINAR, CONFERENCES AND WORKSHOP ORGANISED BY THE DEPARTMENT OF CHEMISTRY

“Strategies To Crack Competitive Exams After BSc” 10th March 2023

The department of Chemistry organized “One Day Webinar on Strategies to Crack Competitive Exams after BSc” on 10th March 2023. More than 80 students were present for the webinar. Mr. Pradhuman Dixit, Institute of Advance Studies, Pune, inaugurated the conference. Hon. Dr. S. B. Patil; Principal of the College was the president of the function.

The Department of Chemistry organized webinar in collaboration with Institute of Advance Studies, Pune on ‘Strategies to Crack Competitive Exams after BSc’ on 16th February 2022. More than 90 students of the college registered for the webinar. Mr. Umesh B. Gawai was the Convenor and Dr. Sandip S. Nandre, Head, the Department of Chemistry of the college was the coordinator.

PUBLICATIONS BY THE FACULTY

Mr. Umesh B. Gawai:

Chapter in Book:

TYBSc, Principles of Physical Chemistry, Photochemistry, Vrinda and Kumud publication, 2021, (ISBN 978-93-88834-81-0)

Paper presented in Seminar/ Conferences/workshop:

National Conferences:

- Development of Microencapsulate of self-healing reagent along with corrosion inhibitor. Presented paper, Advance material and Innovative Processing Ideas (AMIPI), held on 27-28/01/2017 at M.J.M Arts, Commerce and Science college Karanjali, Tal-Peth. (Nashik) (M.S.), India.

International Conferences:

- Presented research paper titled “**Preparation and Characterization of Tung oil and Castor oil microcapsules and probing their utility for controlled released application**” in two days international conference on Current Research in Applied and Fundamental Sciences-2021, organized by Sandip University, Nashik, in collaboration with microbiologist Society, India held virtually on 12th and 13th July 2021.
- Presented research paper titled “**Preparation and Characterization of Tung oil and Linseed oil blend microcapsules and probing their utility for controlled released application**” in two-day International Symposium on New Trends in Science and Technology, organized by New Arts, Commerce and Science College, Parner, Dist.-Ahmednagar, in collaboration with microbiologist Society, India held virtually on 5th and 6th August 2021.
- Presented research paper titled “**Combinatorial Study of Anticorrosive Coatings with Multicore Microcapsules and Polyaniline Nanoparticles: A Novel Approach**” in two days international e-Conference on Polymeric Biomaterials and Bio-engineering, organized by APA Bio-forum, India held virtually on 27th and 28th August 2021.
- Presented research paper titled “**An Intelligent Functional Hybrid Coating: The Novel Path**” in two-day International Virtual Conference on Current Scenario in Chemical Sciences, organized by M.J. College, Jalgaon (M.S.) held on 6th and 7th September 2021.
- Presented poster titled “**Assessment of Anticorrosive Coatings with Multicore Microcapsules and Polyaniline Nanoparticles: A Novel Synergistic Approach**” in two days international Conference on Technologies for Smart Green Connected Societies 2021 at the ICTSGS-1 conference led by Yamagata University Japan, held virtually on 29th and 30th November 2021.

➤ Paper Published by Dr. Sandip S. Nandre

Sr. No	Title of the Research Paper/ Article	Name of the Journal	Nature of the Journal	ISSN No	Vol. and Issue	Impact Factor	Mont and Year of Publication
1	PHYSICO-CHEMICAL STUDY OF GROUND WATERFROM KATWAN REGION IN SAKRI TEHSIL(MS)	Journal of Research and Development	A Multidisciplinary International Journal	ISBN NO-2230-9578	Vol.08 (Special issue06) 117-118.	4.270	Feb 2018
2	PHYSICO-CHEMICAL STUDY OFDAM WATERFROM AKKALPADA (LOWER PANZARA) DAM IN SAKRI TAHASIL (MS)	An International Multidisciplinary Quarterly Research Journal AJANTA	An International Multidisciplinary.	ISSN 2277 - 5730	Vol. VIII Issue –I 133-138.	4.23	March 2019
3	Physico-Chemical Analysis of Drinking Water at different places ArroungPanzara River from Akkalpada to Dhule	Journal Of Research and Development	A Multidisciplinary International Journal	ISSN - 2230 - 9578	Vol.-10 (Issue 01)	4.270	January-2020
4	Synthesis of Cromene derivatives and their microbial activities a compressive review	Vidhyabharti international interdisciplinary research journal	Multidisciplinary International Journal	2319-4979	Volum e 1 Special Issue	1.6	Oct-20
5	Synthesis and Characterization of Metal Complex Cu (II) By Sonochemical Approach	Vidhyabharti international interdisciplinary research journal	Multidisciplinary International Journal	2319-4979	Volum e 1 Special Issue	1.6	Oct-20
6	Preparation, Characterization of Metal Complexes of Tetra- Dentate N, O Donor Schiff	Journal of The Maharaja Sayajirao University of Baroda	UGC Care list Group-1	ISSN-0025-0422	Volume -56, 1 (VI),	1.2	July -2022

	Bases						
7	Study of enthalpy, entropy and free energy of activation of l-arginine & l-valine with distilled water at 298.15 and 308.15 k t	Journal of The Maharaja Sayajirao University of Baroda	UGC Care list Group-1	ISSN-0025-0422	Volume -56, 1 (VI),	1.2	July-2022

➤ **Paper Published by Mr. Umesh B. Gawai –**

Sr. No	Title of the Research Paper/ Article	Name of the Journal	Nature of the Journal	ISSN No	Vol. and Issue	Impact Factor	Mont and Year of Publication
01	Physico-chemical study of ground water from katwan region in sakri tehsil(ms)	Journal of Research and Development	A Multidisciplinary International Journal	ISBN NO-2230-9578	Vol.08 (Special issue06) 117-118.	4.270	Feb 2018
02	Physico-chemical study of dam water from akkalpada (lower panzara) dam in sakri tahasil (ms)	An International Multidisciplinary Quarterly Research Journal AJANTA	An International Multidisciplinary Quarterly Research Journal AJANTA	ISSN 2277 - 5730	Vol. VIII Issue – I 133-138.	4.23	March 2019
03	Physico-Chemical Analysis of Drinking Water at different places arroungpanzara River from Akkalpada to Dhule	Journal Of Research and Development	A Multidisciplinary International Journal	ISSN - 2230 - 9578	Vol.-10 (Issue 01)	4.270	January-2020
04	Study of enthalpy, entropy and free energy of activation of l-arginine & l-valine with distilled water at 298.15 and	Journal of The Maharaja Sayajirao University of Baroda	UGC Care list Group-1	ISSN-0025-0422	Volume -56, 1 (VI),	1.2	July-2022

	308.15 k t						
05	Assessment of Anticorrosive Coatings with Multicore Microcapsules and Polyaniline Nanoparticles: A Novel Synergistic Approach	NeuroQuantology	A Multidisciplinary International Journal	eISSN 1303-5150	Volume 20, Issue8, (Page 6715-6726)	0.442	February 2023
06	Self-Healing Anticorrosive Coatings with Nano Polyaniline: The Hybrid Approach	CORROSION AND PROTECTION	UGC Care list Group-II	ISBN: 1005-748X	Vol. 51, Issue I	0.20	2023
07	Hydrothermal Synthesis of In ₂ O ₃ -SiO ₂ as Recyclable Mesostructured Catalyst Utilized for 2,3-Dihydrophthalazine-1,4-dione (DHP) Derivatives	Asian Journal of Chemistry	UGC Care list Group-II	ISSN-0975-427X	Vol. 35, No. 2 (2023) (507-512)	0.158	2023

PhD Guideship and PhD Students

➤ Dr Sandip S. Nandre :

- Recognized PhD guide of KBC North Maharashtra University Jalgaon.
- One research student registered for PhD.