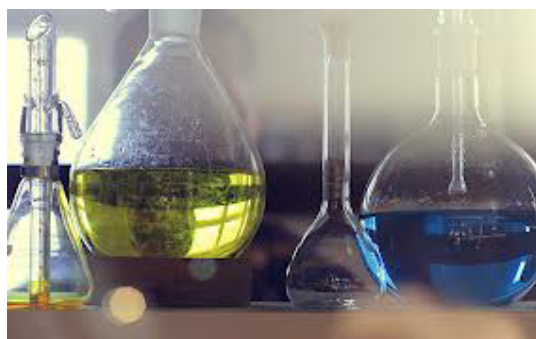


A PROFILE
DEPARTMENT OF CHEMISTRY

2020-21



Vidya Vikas Mandal's
Sitaram Govind Patil Arts, Science and Commerce
College, Sakri (Dhule)

Affiliated to
Kavayitri Bahinabai Chaudhari North Maharashtra
University, Jalgaon

DEPARTMENT OF CHEMISTRY A PROFILE

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Mr. Sunil D. Palkhe (HOD)	
Dr. Deepak V. Nagarale	
Dr. Pritam D. Torawane	
Mr. Dinesh S. Khairnar	
Mr. Surendrasing T. Magar	
Mr. Sandip L. Kadam	
Mr. Mukesh V. Valvi	

INTRODUCTION

THE COLLEGE:-

With the inception of trust **VIDYA VIKAS MANDAL TALUKA SAKRI, DIST. DHULE** It established the Arts and Commerce College, Sakri with an aim to illiteracy ,to spread higher education and upliftment of the society in June 1971. In the decade of seventies there was not a single college in this area except Dhule. Even Dhule was the tribal district of Maharashtra and Sakri Taluka was the most moffusil and tribal part in the district. With the establishment of college ,as if a gate-way to higher education was opened to the tribal area . So this college is playing a vital role in developing proficiency , competency ,cultural, national and social values through curricular, co-curricular and extra-curricular activities since its establishment.

The college was affiliated to PUNE University upto the inception of North Maharashtra University , Jalgaon . It was renamed as Sitaram Govind Patil Arts ,commerce and Science College ,Sakri in 1982 ,after the name of Late Shri Sitaram Govind Patil , the veteran truth seeker of Mahatma Phule, Chhatrapati Shahu and Dr. Ambedkar's thought tradition . The science faculty was newly established with the formerly Arts and Commerce faculties in 11-6-1981.

The College has emerged as an esteemed and renowned educational institution in North Maharashtra University area.

THE DEPARTMENT :-

The science faculty was established in the year June 1981 . The department of Chemistry is one of the most important departments. First Chemistry as a special subject was started in the year 1985 . Until 1981 there was no other science college within the circumference of 60 km. of Sakri. Science faculty provided a gateway to the science for poor, rural and tribal students.

To begin with at F.Y.B.Sc. 60 number of students offered Chemistry as one of the subjects . At T.Y.B.Sc.Principle subject Chemistry was started in the year 1985. The dept. started with single Lecturer Shri M. S. Jain. At present there are 7 Lecturers in the department: Mr. Sunil D. Palkhe (**HOD**), Dr. Deepak V. Nagarale, Dr. Pritam D. Torawane, Mr. Dinesh S. Khairnar, Mr. Surendrasing T. Magar, Mr. Sandip L. Kadam, Mr. Mukesh V. Valvi also served in this dept. for some duration .

AIMS AND OBJECTIVES

The main objectives of the curriculum are:-

- Renewing and updating of the curriculum is the essential ingredient of any vibrant university academic system . There ought to be dynamic curriculum with necessary addition and changes introduced in it from time to by the respective university with a prime objective to maintain updated curriculum and also providing there in input to take care of fast paced development in the knowledge of the subject concerned.
- Curriculum must updated to provide a standard education .
- To meet the need and requirement of the society and in order to enhance the quality and standards to achieve excellence in higher education , updating and restructuring of the curriculum must continue as a perpetual process.
- To improve the standards to achieve excellence in higher education.
- Curriculum has been provided to take care of the lacuna, defects, shortcomings in the existing curricula. A new model aiming to produce innovative concepts, to provide a multidisciplinary profile and to allow a flexible cafeteria like approach including new papers to cater the frontier development in the concerned subject.
- To combine the practical requirement of teaching in the Indian academic context with the need to observe high standards to provide knowledge in the frontier areas at their disciplines . It has also been aimed to combine the goals and parameters of global knowledge with pride in the Indian heritage and Indian contribution in this context.
- Present exercise may be considered timely to met the demands of the changes in chemical education and societal aspirations in general.
- A number of avenues have opened up for employment of Chemistry graduate in the industrial sectors. Some of the areas that offer opportunities to chemists are drugs, food, Polymer, textile and agro based industries. An efforts has been made in the curricula to provide background material for these topics to the students for taking up jobs in this sector.

- Introduction of eco-friendly and micro-scale experiments in the laboratory with particular emphasis on instrumental methods of analysis. The experiments have been co-ordinated to a great extent with theory courses for better appreciation.

STAFF OF DEPARTMENT

The teaching and non teaching staff working in the Chemistry department are as follows:-

A) Teaching Staff:-

Sr. No.	Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. Students guided for the last 4 years
1.	Mr. Sunil D. Palkhe HOD	M.Sc.	Associate Professor	Organic Chemistry	36	Nil
2.	Dr. Deepak V. Nagarale	M.Sc., NET-JRF., Ph.D.	Assistant Professor	Organic Chemistry	1.5	Nil
3.	Dr. Pritam D. Torawane	M.Sc., Ph.D.	Assistant Professor	Organic Chemistry	1.5	Nil
4.	Mr. Dinesh S. Khairnar	M.SC., NET-JRF, SET.	Assistant Professor	Organic Chemistry	1.5	Nil
5.	Mr. Surendrasing T. Magar	M.SC., NET-JRF, SET.	Assistant Professor	Organic Chemistry	1.5	Nil
6.	Mr. Sandip L. Kadam	M.SC., NET-JRF, SET.	Assistant Professor	Organic Chemistry	1.5	Nil
7.	Mr. Mukesh V. Valvi	M.SC., NET-JRF.	Assistant Professor	Organic Chemistry	1.5	Nil

B) Non-teaching Staff :-

Sr. No.	Name of teacher	Design.	Qualifi .	Specializ ation	Age	Sex	Exper. in years	Category
1	Shri. K. B. More	Lab. Assitt	12 th Sci	Marathi, History	36	M	7	SC
3	Shri-H.Y.Bedse	Lab-Attendance	12 th Sci	Marathi	57	M	28	OBC

INFRA STUCTUR

C) Laboratory report :-

Laboratory is the soul of Science departments. Our department laboratory is spacious, well equipped and comfortable for Under graduate level students. The laboratory is well lighted and ventilated. The laboratory process sufficient furniture,

storage facilities, show cases, glass wares, instruments, charts and models. Within the years department has utilized 100% grant sanctioned by college authorities. At least 30 students performs there experiments at same time.

Intruments and equipments purchased under U.G.C. grant:-

Sr.No.	Title of material	Quantity	Price
1	Incubator (Oven) 14"x14"x14"	1	3500-00
2	Hot Plate with regulator	1	800-00
3	Conductivity bridge complete ELICO CM-82.330/0045	1	6000-00
4	Photoelectric colorimeter CL-20 with fine filters	1	7300-00
5	Chemical balance	4	3000-00
6	Beranger balance	1	350-00
7	Potentiometer	1	6300-00
8	Sodium vapour lamps	1	1400-00
9	Standerd cell 1.018	1	650-00
10	Hair drier	2	500-00
11	I.R.lamps Philips	2	600-00
12	Stop watch racer 1/10 sec.	2	1400-00
13	Filters for electrocolorimeter (440,520,540)	6	1500-00
14	PHmeter complete with combined electrode	1	6000-00
15	Photo eletode colourimeter Erma Japan make model digital	1	20000-00
16	Refractometer	1	6000-00
17	Thermostatic water bath	1	3000-00
18	Magnetic stirrer with hot plate	1	4050-00
19	Stop watch racer 1/10 sec.	3	3600-00
20	Potentiometer dual channel Equiptranic	1	3400-00
21	Platinum electrode	1	800-00
22	Calomel electrode	1	750-00
23	Conductivity meter digital with magnetic stirrer with cell Eq.664	1	8000-00
24	Electric digital potentiometer with magneti stirrer and STD cell	1	4600-00
25	Glass electrode	2	900-00
26	Silver electrode	1	450-00
27	Conductivity cell	1	1200-00
28	Spectrophotometer 340nm.960nm (105)	1	24000-00
29	Vaccum cum pressure pump	1	11000-00
30	PH meter digital No.610	1	5500-00
31	Magnetic stirrer 2 lit. cap with liquid heating bath 2 MLB Sr. No.1603	1	4000-00
32	Model NEM 120 A Charge cap.120 gm SR No.	1	12962-00

	22615 (Eletronic balance		
33	Distillation app. 5lit.	1	2500-00
34	PHmeter with magnetic stirrer	1	6670-00
35	Photoelectric colorimeter with five filters	1	6900-00
36	Metzer biomedical laboratory hot air oven	1	17500-00
37	Stalganometer with box	6	1110-00
	2007 to2012		
38	1.9999 V Research Model Chargeable Battery cum Mains operated	2	10400
39	Special Set of App. For Titration Experiment Eq602 +Eq707	2	12000
40	pH meter with built in Electroni Buffer	2	12000
41	Condctivity Meter Auto Temperature with Temperature Probe (Research Model) (0.05µm to 200mM	2	13600
42	Battery Operated Autotemp. Compensation with 3 probes suilttable for fieldwork (pH-0-14pH, Cond- 1µs to-200ms, Temp-1-100Deg C)	1	16000
43	Vis(350-950nm)with digital wave length read out read OD%T	2	59000
44	Vis(190-1100nm)with digital wave length read out read OD%T and concenpation band width3nm	1	90000
45	Digital Melting /Boiling point apparatus upto 300° with accuracy ±0.1°	3	48000
46	Vacuum Pump Double Stage-1/4 HP Electric Motor & 50 Ltrs/Min. Free Air Displacement	1	12600
47	PH Meter With Calomel Electrode	3	25500
48	Conductivi meter with battry	3	25500
49	Potentio meter Digital-	3	19500
50	PH Meter With Magnetic Stirrter	2	16600
51	Citizen ELECTRONIC DIGITAL BALANCES - Capacity-300gm(Accuracy-0.01gm) [10 mg]	1	12500
52	Water distilation plant	1	7000
53	Digital Potentiometer without electrode Eq-609	1	6300
54	Refrance electrode for Potentiometer	1	500
55	Platinum electrode for Potentiometer	1	1000
56	Zinc electrode	1	230
57	Copper electrode	2	460
58	Platinum electrode for Potentiometer	3	3000
59	PH Meter With Calomel Electrode Eq- 615	2	17000
60	Conductivi meter with battry Eq-665	2	17000
61	Potentio meter Digital- Eq-606	2	13000
62	Photoelctric Colorimeter Digital with built in set of 8 filter Eq-651	1	9900
63	PH Meter With Magnetic Stirrter Eq-614	1	8300

ii) Instruments and equipments purchased by college authority :-

Sr.No.	Title of material	Quantity	Price
1	Automatic petrol gas plant 80 burners capacity	1	6500-00
2	Bunsun burner	40	600-00
3	Potentiometer	1	3000-00
4	Kipps apparatus 500cc	1	375-00
5	Sxhelts extraction app.	1	450-00
6	Meter direct reading conductivity meter model metzer 489	1	2850-00
7	Conductivity cell	2	1200-00
8	Single pan balance cap 200 gms (sunshine)	1	5360-00
9	Land bergers apparatus	3	2550-00
10	Abbe retractometer	1	5000-00
11	Conductivity meter	1	8500-00

iii) charts and model:-

Various types of charts are put up on the walls which are useful to understand some basic concepts in Chemistry . The list of charts is as follows :-

Sr..No.	Name	Price
1	Periodic classification of elements (Long form)	394-00
2	C-4 Shape of atomic orbitals	156-00
3	C-5 Relative energies of atomic orbitals	146-00
4	C-17 Optical isomerism	156-00
5	C-18 Fischer projection formula of various aldoses	136-00
6	C-22 Conformation of Ethane and Cyclohexane	156-00
7	C-23Molecular orbitals of Benzene	146-00
8	C-24 Alpa Helical Str. Of Polypeptide	156-00
9	C-25 DNA structure	232-00
10	C-27 Formation of molecular orbitals	146-00
11	Ionization potential	187-00
12	Manufacture of cement dry process	187-00
13	Fuel gases (Oil and Water)	193-00
14	Metallurgy of copper	197-00

15	Manufacture of Sugar from sugar cane	187-00
16	Liquification of gases	193-00
17	Millikans Oil drop method	187-00
18	Stick ball model	200-00

iv) List of deadstock/miscellaneous :- Items in the department:-

Sr..No.	Particular	Quantity	Amount
1	Automatic Petrol Gas Plant	1	6500-00
2	Incubator	1	3500-00
3	Hair Drier	2	500-00
4	Infra Red lamp Philips	2	600-00
5	Stop watch racer 1/10	2	1400-00
6	PH meter comp. assembly with combined eletrode No.803	1	6000-00
7	Metzer direct reading conductivity meter No.489	1	2850-00
8	Conductivity cell	2	1200-00
9	Chemical Balance	2	1500-00
10	Physical Balance	3	2700-00
11	Stop clock with fly back action	2	360-00
12	Single Pan Balance	1	5360-00
13	Lab sinc	1	740-00
14	Digital Stop watch	2	1040-00
15	Lab stirrer with HP	1	3400-00
16	Cease fire	2	992-00