

Rayat Shikshan Sanstha's

S.S.G.M. College, Kopargaon, Dist- Ahmednagar

Department of Chemistry

2017-18

**CERTIFICATE COURSE IN WORKING AND OPERATION OF
INSTRUMENTS IN ANALYTICAL CHEMISTRY**

Board of Studies (BOS)

Department of Chemistry have decided to start Certificate Course in **Working and Operation of Instruments in Analytical Chemistry**. For framing the Syllabus of said course, committee was constituted as follow.

Board of Studies Member (BOS)

- | | |
|--------------------------|---|
| 1. Prin. Dr. Thopte S.S. | : Chairman |
| 2. Mr. Deshmukh A.K. | :HOD of Chemistry |
| 3. Prof. JadhavAjit | :Placement Officer |
| 4. Dr. Malpure N. V. | :IQAC- Coordinator |
| 5. Dr. Konda Rakesh | :Professional Expert |
| 6. Mr. MAITRIYA A D. | :Director of Shodh Advantech,Aurangabad |

Aims and Objectives of the course:

- 1) To provide an adequate knowledge of the principles
- 2) instrumentation and applications of common analytical techniques
- 3) including atomic and molecular absorption spectroscopy
- 4) electrochemical and separation methods
- 5) Understand the operational framework for best practices in Company .

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Career Oriented Course 2017-18
Working and Operation of Instruments in Analytical Chemistry

15.11.17

NOTICE

The student of M. Sc-II Analytical chemistry are here by informed that our department run Career Oriented Certificate Course entitled Working and Operation of Instruments in Analytical Chemistry for the year 2017-18. The candidates should register their names to Mr. Nehe (Lab.Assistant).




15-11-2017
Head,
Department of Chemistry,
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Enrolled Students List

Sr.No	Name of Students	Course Fees in Rs
8601	Admane A. J	Nil
8602	Bansode P. N	Nil
8603	Bhandare R. D	Nil
8604	Chinchpure A. M	Nil
8605	Choudhari J. R	Nil
8606	Chunale M. D	Nil
8607	Deokar S. R	Nil
8608	Ghodake S. D	Nil
8609	Gorade S. D	Nil
8610	Jamdhade V. N.	Nil
8611	Mishra V. D	Nil
8612	More D. M	Nil
8613	Naikwade S. R	Nil
8614	Nikam V. U	Nil
8615	Pachore P. M	Nil
8616	Pawar P. P	Nil
8617	Rahane R. D	Nil
8618	Raut K. K	Nil
8619	Sabane P. B	Nil
8620	Tirse V. R	Nil
8621	Vairal A.D	Nil
8622	Wagh G. S	Nil



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Course Syllabus

Marks: 100 (T-40 & P- 60)

Total Lecture: 24

Section: I- Theory Course

20-credit

1) Use of Computer in Chemistry: Introduction to programming language, Basic of molecular methods, Use of Chem draw, ISAC chemistry software's.
02 credit

2) Chromatography: Gas Solid chromatography, Gas liquid chromatography, High performance liquid chromatography (HPLC), Paper chromatography and thin layer chromatography.
04-credit

3) Instrumentation- application in organic reactions: **08-credit**
-Rota vapour (Drying and distillation),
-Ultra sonication,
-Pressure reactor,
-TGA,
-Flame photometry,
-Polarimetry,
-Photoflurometry.

4) Spectroscopic Techniques: **06-credit**
-UV and Visible spectrophotometer,
-IR Spectroscopy,
-Mass Spectroscopy,
-X-ray Spectroscopy.




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Section: II- Practical Course

10-credit

- 1) Water Analysis: Determine COD, BOD, DO parameters.
- 2) Use of Computer in analysis: Chemdraw software.
- 3) Chromatography Techniques: Paper chromatography, thin layer chromatography, Column chromatography.
- 4) Analysis of Brass sample.
- 5) Analysis of Ore- Dolomite, Bauxite.
- 6) Analysis of Pigments
- 7) UV-Visible spectrophotometer
- 8) Flame photometry
- 9) Nephelometry
- 10) Karl Fischer apparatus (Determination of Moisture)
- 11) TGA
- 12) PH meter
- 13) Rota vapour (Drying and distillation)
- 14) Ultra sonication

Reference:

- 1) Spectroscopic method in organic chemistry- D.H.Williams
- 2) Quantitative inorganic analysis- A.J.Vogel
- 3) Analytical chemistry- G.D.Chrooin
- 4) Introduction of instrumental analysis- R.D.Braun



A handwritten signature in blue ink, appearing to be "A. B. B." or similar, written in a cursive style.

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W.e.f-01/12/2017


Time Table

Time	Mon	Tue	Wed	Thur	Fri	Sat
8.00-9.00 am	T	T	T	T	T	
9.00-10.00 am	T	T	T	T	T	
10.00- 11.00am			P	P		

T-Theory Course-ABN/NMC/RKI

P-Practical Course-RKM/SRB/PDK




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Attendance

Sr.No	Name of Students	Attendance %
8601	Admane A. J	78
8602	Bansode P. N	96
8603	Bhandare R. D	95
8604	Chinchpure A. M	96
8605	Choudhari J. R	95
8606	Chunale M. D	88
8607	Deokar S. R	89
8608	Ghodake S. D	93
8609	Gorade S. D	90
8610	Jamdhade V. N.	80
8611	Mishra V. D	96
8612	More D. M	88
8613	Naikwade S. R	93
8614	Nikam V. U	95
8615	Pachore P. M	94
8616	Pawar P. P	94
8617	Rahane R. D	85
8618	Raut K. K	75
8619	Sabane P. B	89
8620	Tirse V. R	80
8621	Vairal A.D	89
8622	Wagh G. S	75



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Exam Time-Table

Time	04/04/2018	05/04/2018	06/04/2018
11-2 pm	Batch-A	Batch-B	Batch-C

Batches-

- A) Roll No-8601-8607
- B) Roll No-8608-8615
- C) Roll No-8616-8622



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Question Paper
(solve any five)

- | | |
|---|-----|
| Q. 1) Perform the purification of given compound on Rota vapour instrument. | 20M |
| Q. 2) Determine Wavelength of Lycopene by using U.V. instrument. | 20M |
| Q.3) Enlist different section of Pharmaceutical industries. | 20M |
| Q.4) Write a note on process water. | 20M |
| Q.5) Write a note Chemical Safety. | 20M |
| Q.6) Determine moisture content of given compound by using TGA. | 20M |



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Result

No. of Students Appeared	Students Passed	Students Failed	% Result
22	22	Nil	100




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Working and Operation of Instruments in Analytical Chemistry

Distribution of Certificate

The following students were receive the certificate for the short term course 2017-18

Sr.No	Name of Students
1	Admane A. J
2	Bansode P. N
3	Bhandare R. D
4	Chinchpure A. M
5	Choudhari J. R
6	Chunale M. D
7	Deokar S. R
8	Ghodake S. D
9	Gorade S. D
10	Jamdhade V. N.
11	Mishra V. D
12	More D. M
13	Naikwade S. R
14	Nikam V. U
15	Pachore P. M
16	Pawar P. P
17	Rahane R. D
18	Raut K. K
19	Sabane P. B
20	Tirse V. R
21	Vairal A.D
22	Wagh G. S



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S.S.G.M. College Kopargaon
 Dist- Ahmednagar,
 Certificate course in Instrumental Methods In chemical Analysis
 Feedback Form (Year 2017-18)
 How you like this activity ?
 (Please tick (✓) on the appropriate option)

Sr.No.	Criteria's	Excellent	Very Good	Good	Average	Poor
1.	Content of curriculum		✓			
2.	Quality of lectures	✓				
3.	Quality of practicals		✓			
4.	Arrangement of tour and hands on training collaboratively organized	✓				
5.	Is the course is applicable for entrepreneurship development in your futue life ?		✓			
6.	Is the course is beneficial for students and parents as far as environment and crop production is concerned ?	✓				

Any suggestion:-

Name of the Student:- Bansode P. N.

Class:- T.Y.B.Sc.

Signature:- Bansode P.N.



"Education Through Self - Help is our Motto" - Karmaveer

Rayat Shikshan Sanstha's

Shri Sadguru Gangageer Maharaj Science,
Gautam Arts & Sanjivani Commerce College

Kopargaon, Dist. Ahmednagar (M.S.)



Short Term Course

CERTIFICATE OF COMPLETION

This is to Certify that Shri/Ky/m. Mishra V. D.
of Class M.Sc.-II has Completed Short Term Course in Working & operation
of Instruments in Ana.Chemistry conducted by the department of Chemistry
during the academic year 2017 /2018


Course Co-ordinator


Co-ordinator


Principal
S.S.G.M.College
Kopargaon


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Report

The department of chemistry conducts Career Oriented Certificate Course entitled Working and Operation of Instruments in Analytical chemistry. Total 22 students of M. Sc-II Analytical chemistry were admitted in the course. The duration of course is 1 Dec 2017 to 31 Mar 2018. The course was conducted satisfactorily by the dept. Of chemistry.



 9-4-18
Head,
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