

TATKARE CHARITABLE TRUSTS,
DR.S.N.D. ARTS, COMMERCE & SCIENCE COLLEGE,
GOVE-KOLAD, ROHA-RAIGAD
(2023-2024)

DEPARTMENT OF SCIENCE

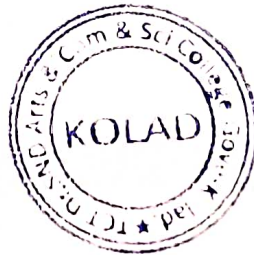
DATE-6/01/2024


NOTICE

All T.Y.B.Sc Student of Science faculty is hereby inform that the Department of Science have organized Soft Skill Development Course on "INSTRUMENTAL TECHNIQUE IN CHEMICAL ANALYSIS" is scheduled on 08/01/2024 to 13/01/2024. This course is free of cost. Interested Students can give their name to HOD.

Note:-Detail Time-Table will be displayed soon.


Head
Department Of Chemistry




PRINCIPAL
TCT Dr Shree Nanasaheb Dharmadhikari
Arts, Commerce & Science College Gova-Kolad
Tal. Roha, Dist. Raigad

TATKARE CHARITABLE TRUSTS,
DR.S.N.D. ARTS, COMMERCE & SCIENCE COLLEGE,
GOVE-KOLAD, ROHA-RAIGAD
ACADEMIC YEAR 2023-2024

DEPARTMENT OF SCIENCE

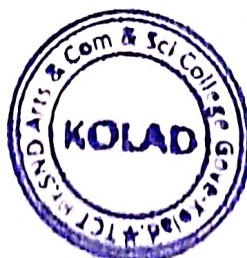
SKILL DEVELOPMENT COURSE ON
INSTRUMENTAL TECHNIQUES IN CHEMICAL ANALYSIS

TIME TABLE

CLASS -T.Y.B.Sc

DATE -8/01/2024 TO 13/01/2024

DATE	TIME
08/01/24	12.30PM TO 1.30PM
09/01/24	12.30PM TO 1.30PM
10/01/24	12.30PM TO 1.30PM
11/01/24	12.30PM TO 1.30PM
12/01/24	12.30PM TO 1.30PM
13/01/24	12.30PM TO 1.30PM



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ACADEMIC YEAR 2023-2024**

Department of SCIENCE

**Skill Development Course
“INSTRUMENTAL
TECHNIQUE IN CHEMICAL ANALYSIS”
SYLLABUS**

Module	Contain	Lectures
Module I: pH Metry	<ul style="list-style-type: none"> • INTRODUCTION • PRINCIPLES • USES OF INSTRUMENTAL METHOD • HANDLING METHOD AND WORKING • APPLICATIONS AND BENEFITS 	04
Module II: COLORIMETRY SPECTROPHOTOMETER	<ul style="list-style-type: none"> • INTRODUCTION • PRINCIPLES • USES OF INSTRUMENTAL METHOD • HANDLING METHOD AND WORKING • APPLICATIONS AND BENEFITS 	08
Module III: CONDUCTOMETRY	<ul style="list-style-type: none"> • INTRODUCTION • PRINCIPLES • USES OF INSTRUMENTAL METHOD • HANDLING METHOD AND WORKING • APPLIACTIONS AND BENEFITS 	04
Module IV: POTENTIOMETER	<ul style="list-style-type: none"> • INTRODUCTION • PRINCIPLES • USES OF INSTRUMENTAL METHOD • HANDLING METHOD AND WORKING • APPLICATIONS AND BENEFITS 	04
	Exam PRACTICAL= 50 M THEORY = 25 M	

Course: INSTRUMENTAL TECHNIQUE IN CHEMICAL
ANALYSIS

Program: Electronics and instrumentation

This course aims at analyzing different process variables as well as composition of a compound.

COURSE OBJECTIVES

This course is designed to give the student an understanding in the operation and care of instruments used in the chemical laboratories of industry.

- To introduce the student to principles and theory of instrument analysis.
- To teach the student the correct operation of chemical instruments.
- To introduce the student to the techniques of troubleshooting instruments in the chemical laboratory.
- To emphasize the safe use of chemical instrumentation.
- To teach the student to solve problems related to the use of chemical instruments.
- To stress proper record keeping in the chemical laboratory and plant.
- To encourage library use as applied to instrumental analysis.

COURSE OUTCOMES:

At the end of the course, a student will be able to:

1. **Select** the required instruments for various analysis.
2. **Understand** the effects of different constituent in a process outcome and analysis the performance of various on-line or off-line instruments.
3. **Apply** the knowledge of the constituents from a complex mixture.
4. **Describe** and **differentiate** between online and offline process and Identifies suitable instruments for analysis gaseous, liquid or solid substance.
5. **Decide** the dominate frequency characterize the substance from spectrum analysis.
6. **Perform** experimental **analysis** for different offline test like humidity, moisture, dissolve oxygen etc.

Course session Plan (2023-2024)

Module	Module 1	Module 2	Module 3	Module 4
Title	pH	COLORIMETRY AND SPECTROPHOTOMETRY	CONDUTOMETRY	POTENTIOMETER
Guider of session	Asst.prof. Kirthi Radhakrishnan	(HOD) Asst.prof.Reshma shelke	Asst.prof.Darshana Mali	Asst.prof.Geethu Mohan
Session 1	Introduction to Instrumentation : Classification, types of Instrumental methods	Molecular Absorption Spectroscopy in UV & VIS ranges:	Electrodes-Ion selective, Molecular selective types-their variations.	Electrodes-Ion selective, Molecular selective types-their variations.
Session 2	Ph method.	Atomic Absorption spectroscopy: sources, single & dual beam arrangement.	Conductivity cells – standards, circuits.	Principle explanation
Session 3	Applications and its benefits	Emission spectroscopy : Atomizers, sources, single & dual beam arrangement	Handling	Handling
Session 4	Handling	Applications and its benefits.	Sequential & Simultaneous multichannel Instruments	Applications and its benefits
Session 5	Taking performance by students .	Taking performance by students .	Taking performance by students .	phenomena, sources, detectors, techniques.
Session 6	Viva Question on instruments	Viva Question on instruments	Viva Question on instruments	Viva Question on instruments,

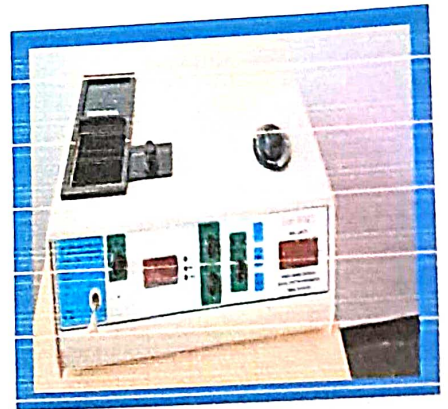
INSTRUMENTS USED FOR ANALYSIS



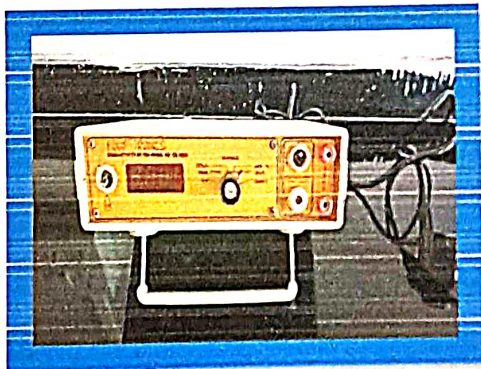
pH meter



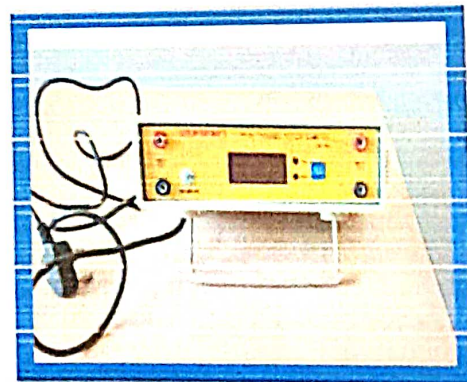
Colorimeter



Spectrophotometer



Conductometer



Potentiometer



STUDENTS WORKING ON VARIOUS STEPS RELATED WITH SKILL COURSE



CERTIFICATE

THIS IS TO CERTIFY THAT

Mr. Yelkar Pratik Deepak

HAS SUCCESSFULLY COMPLETED THE


CERTIFICATION PROGRAM IN

“INSTRUMENTAL TECHNIQUE IN CHEMICAL ANALYSIS”

FROM 08/01/2024 to 13/01/2024

ORGANISED BY SCIENCE DEPARTMENT

T.C.T DR.S.N.D. A.C.Sc COLLEGE GOVE KOLAD .


TEACHER-IN-CHARGE

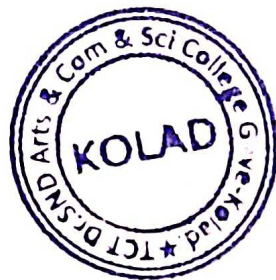

H.O.D.


PRINCIPAL

DATE : 28/02/2024

STUDENTS PARTICIPATION LIST FOR COURSE:-

SR. NO	NAME OF STUDENTS
1.	NIVALE MAYURA MARUTI
2.	YELKAR PRATIK DEEPAK
3.	GAUD SIMRAN RAMU
4.	PADWAL PRATHAMESH BABAN
5.	MHATRE KRUTIKA KRISHNA
6.	SHIRKE ROHAN BHAGAVAN
7.	GHAVATE TANYA JAGANNATH
8.	JADHAV SANIKA RAJENDRA
9.	KHAMAKAR KAVITA KISAN
10.	MHATRE NIRAJ SHARAD
11.	BHOY MANASI TUKARAMA
12.	CHAVAREKAR VINIT GANESH
13.	DHAMANSE SANCHIT SANJIVKUMAR
14.	CHITALE SAKSHI RAJENDRA
15.	KEER YASH SANDEEP
16.	SHID MANISHA NARAYAN
17.	YUVRAJ NAMDEV BHOIR
18.	SHIRKE ROHIT RAM
19.	TADKAR SHREYASH MANGESH
20.	SHID EKNATH CHIMAJI



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A Report on the Skill development course on


“INSTRUMENTAL TECHNIQUE IN CHEMICAL ANALYSIS”

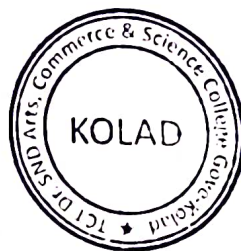
Department Of science organized The skill development course on “Instrumental technique in chemical analysis” which was conducted from 08/01/2024 to 13/01/2024, at 12.30 P.M to 1.30 P.M. This course was beneficial for our students to have knowledge on Instruments and there knowledge . So it will further helpful for their future goals. We realized the need for such knowledge for the student’s upcoming future.


Students will get cognition through this skill development course . This course are free of cost for the students. We realized the need for such a course as future goals. The course began with an inaugural function at 10:30 A.M. By Principal Dr. Deshmukh V.V. of Dr. Shree Nanasaheb Dharmadhikari Art's, Commerce And Science College Gove-Kolad.

All the sessions were conducted by Asst.Prof .Shelke .R. (Course Co-ordinator) who spoke on the importance of course and instruments applications for the job. All sessions are distributed as per syllabus/ content to various guider under sessions.

20 Students have Participated in this Course. The Purpose behind this course to encourage in skills and shape them for facing interview section in future. The session ended with giving participation certificates by Dr. Deshmukh V.V.


(Asst.prof Shelke .R)
Course co-ordinator




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