

**TATKARE CHARITABLE TRUSTS,
DR.S.N.D. ARTS, COMMERCE & SCIENCE COLLEGE,
GOVE-KOLAD, ROHA-RAIGAD
(2022-23)**

DEPARTMENT OF SCIENCE

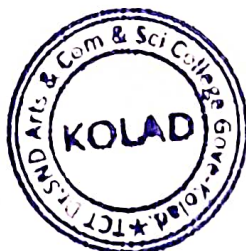
DATE-12/01/2023


NOTICE

It is for the information of all T.Y.B.Sc Student of Science faculty that the Department of Science have organized Soft Skill Development Course on "INSTRUMENTAL TECHNIQUE IN CHEMICAL ANALYSIS" is scheduled on 16/01/2023 to 21/01/2023. 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 2022-2023**

DEPARTMENT OF SCIENCE

**SKILL DEVELOPMENT COURSE ON
INSTRUMENTAL TECHNIQUES IN CHEMICAL ANALYSIS**

TIME TABLE

CLASS –T.Y.B.Sc

DATE -16/01/2023 TO 21/01/2023

DATE	TIME
16/01/2023	1.00PM TO 2.00PM
17/01/2023	1.00PM TO 2.00PM
18/01/2023	1.00PM TO 2.00PM
19/01/2023	1.00PM TO 2.00PM
20/01/2023	1.00PM TO 2.00PM
21/01/2023	1.00PM TO 2.00PM



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 2022-2023**

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
	<p style="text-align: center;">Exam</p> <p style="text-align: center;">PRACTICAL= 50 M</p> <p style="text-align: center;">THEORY = 25 M</p>	

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:

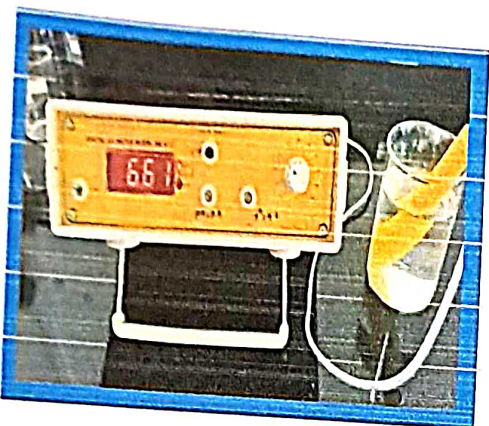
At the end of the course, a student will be able to:

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 (2022-2023)

Module				
	Module 1	Module 2	Module 3	Module 4
Title	pH	COLORIMETRY AND SPECTROPHOTOMETER	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,

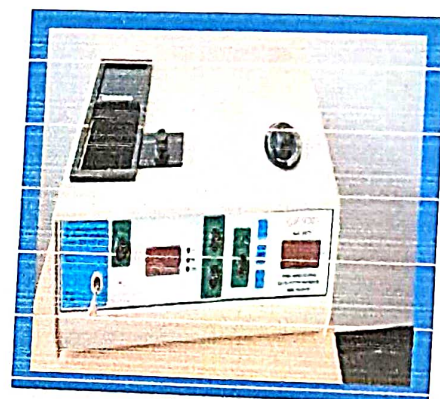
INSTRUMENTS USED FOR ANALYSIS



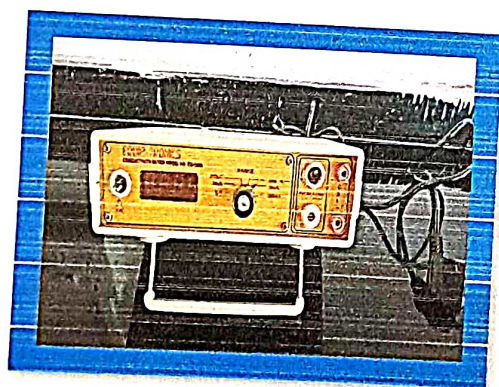
pH meter



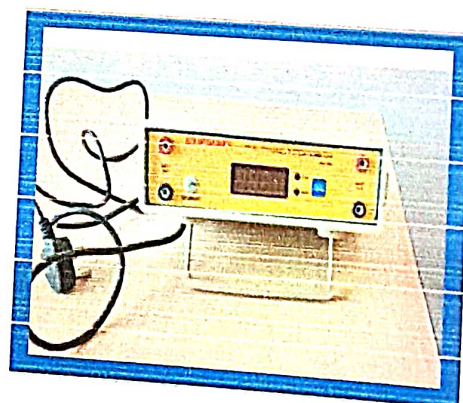
Colorimeter



Spectrophotometer



Conductometer



Potentiometer



CERTIFICATE

THIS IS TO CERTIFY THAT

Mr. Patil Rohan Ravindra

HAS SUCCESSFULLY COMPLETED THE
CERTIFICATION PROGRAM IN

"INSTRUMENTAL TECHNIQUE IN CHEMICAL ANALYSIS"

FROM 16/01/2023 to 21/01/2023

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 : 28/02/23

STUDENTS PARTICIPATION LIST FOR COURSE:-

SR. NO	NAME OF STUDENTS
1.	AMBRUSKAR SAKSHI DNYANESHWAR
2.	BARASKAR AMISHA SUDHIR
3.	PATIL ROHAN RAVINDRA
4.	AREKAR VAIDEHI SUNIL
5.	PANSARE RUTWESH ARVIND
6.	YERUNKAR CHAITANYA AJIT
7.	SURVE SANISH SACHIN
8.	SANAP VIBHA VIJAY
9.	SALVI NEHA HARISHCHANDRA
10.	MITTE ARKESH AJIT
11.	MAHADIK SUBODH SUDHAKAR
12.	BAMANE AKSHAY ASHOK
13.	MAHADIK ROHIT SANTOSH
14.	DESHMUKH PRASAD PRAVIN
15.	KADAV VANSI RAJESH
16.	DIVEKAR SUYASH NATHURAM
17.	SANAP POOJA GOVIND NANDINI
18.	KHADE ASHVINI GHANASHYAM
19.	TADKAR DARSHAN KASHINATH
20.	DARIPDHAR ASHLESHA PRASHANT



**TATKARE CHARITABLE TRUST's,
DR. S.N.D. ARTS, COMMERCE & SCIENCE COLLEGE,
GOVE-KOLAD, ROHA-RAIGAD
ACADEMIC YEAR 2022-2023**

A Report on the Skill development course on

“INSTRUMENTAL TECHNIQUE IN CHEMICAL ANALYSIS”

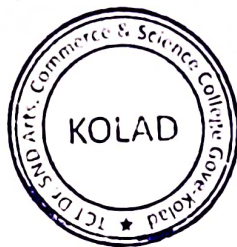
Department Of science organized The skill development course on “Instrumental technique in chemical analysis” which was conducted from 16/01/2023 to 21/01/2023, at 1.00 P.M to 2.00 P.M. This course was beneficial for our students to have knowledge on Instruments and there knowledge . So it will further 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 I/C Principal. Pradhan Nehal 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 By I/C Principal. Pradhan Nehal.

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




PRINCIPAL

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