

## Criterion 1 - Curricular Aspects

### 1.2 Academic Flexibility

*Number of Add on /Certificate programs offered during the year*

**1.2.2.1: How many add on /Certificate programs are added during the year.  
Data requirement for year: 2023-24**

Sr.no	Name of Add on /Certificate programs offered	Page no
1	soft skill Course	2-9
2	Basic instrumentation skill	10-17
3	Chemdraw certificate course	18-33
4	Bridge Course	34-51
5	Chemical handling & laboratory safety	52-60

**Shri. Dr. R. G. Rathod Arts and Science College, Murtizapur**  
**Department of Physics**  
**Notice**

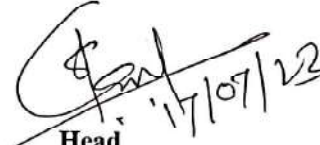
**SOFT SKILL**

**Session: 2023-24 (ODD - Semester)**

All the students of **B.Sc. III (Sem V)** are hereby informed that Department of Physics will be starting new Soft Skill Course "**Creative Thinking and Reasoning Skill**" **from this session** . We are hoping that the development from this course will help you advance your career. So, all the students of B.Sc. III should be enroll in this course.

**Date: 17/07/2023**

  
Incharge

  
Head  
Department of Physics

  
Principal  
Shri. Dr. R. G. Rathod Arts & Science  
College, Murtizapur, Dist. Akola

## **Soft Skill Course**

### **Creative Thinking and Reasoning Skill**

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#### **Aim:**

Thinking creatively makes you a better problem-solver, which has far-reaching benefits in both your work and personal life. Expressive, creative thinking helps us challenge our own assumptions, discover new things about ourselves and our perspective, stay mentally sharp, and even be more optimistic. Similarly, the ability to solve questions on Analytical Reasoning and Data Sufficiency is a critical area tested in almost all competitive examinations and admission tests.

#### **Objectives:**

Creative thinking capability aims to ensure that students develop: understanding of thinking processes and an ability to manage and apply these intentionally. Skills and learning dispositions that support logical, strategic, flexible and adventurous thinking. Solve questions on non-verbal and analytical reasoning, data sufficiency and puzzles.

#### **Curriculum:**

S. N.	Unit	Topics	Hours
1	Introduction to the Principles of Creativity	Basic principles of creativity, highlight importance of creativity, types of Creativity, lower and higher-level creativity.	4
2	Creativity Tools	Different methods of Brainstorming, application of brainstorming tools, different types of brainstorming techniques.	4
3	Thinking Styles	Thinking styles, application of thinking styles, types of thinking styles.	4
4	Morphological Analysis	Principles of Morphological Analysis, applications of Morphological Analysis	4
5	Verbal Reasoning	Introduction, coding-decoding, Blood Relation, direction, distance, Puzzle, Ranking	6

6	Analytical Reasoning	Cubes and dices, counting of geometrical families	4
7	Logical Deduction	Venn Diagrams, Syllogisms, Data Sufficiency, binary logic	4
		<b>Total Hours</b>	<b>30</b>

### Course Outcomes:

- Student will understand benefits of personal creativity and creative tools.
- Creativity helps students to solve their problems more effectively.
- Personal creativity inspires collective thinking. Creativity nurtures ideas. Creativity supports resilience.
- Students will apply various thinking styles to solve their problems.
- Morphological analysis allows students to look for creative ideas when developing strategies.
- Students will be able to solve questions based on non-verbal and analytical reasoning, data sufficiency and puzzle.
- Students will apply different concepts, ideas and methods to solve questions in reasoning and data sufficiency.



**SHRI. DR. R. G. RATHOD ARTS & SCIENCE COLLEGE, MURTIZAPUR DIST. AKOLA.**  
**DEPARTMENT OF PHYSICS**  
**ATTENDANCE SHEET**  
**Soft Skill Course**  
**B. Sc. III – (Semester-V)**  
**Session: 2023-2024**

Sr. No.	Name of the students	Date	Date	Date	Date	Date	Date
		18/08	21/08	22/08	23/08	28/08	29/08
1	ABOLI SANTOSH TIKE	A.S.Tike	A.S.Tike	A.S.Tike	A.S.Tike	A.S.Tike	A.S.Tike
2	ANKITA DIGAMBAR SARDAR	A.D.Sardar	A.D.Sardar	A.D.Sardar	A.D.Sardar	A.D.Sardar	A.D.Sardar
3	ANUSHREE D. VAIDHYA	A.Vaidhya	A.Vaidhya	A.Vaidhya	A.Vaidhya	A.Vaidhya	A.Vaidhya
4	ARATI SHANKAR BAVANE	A.Bavane	A.Bavane	A.Bavane	A.Bavane	A.Bavane	A.Bavane
5	ASHISH DILIP MARASKOLHE	A.Maraskolhe	A.Maraskolhe	A.Maraskolhe	A.Maraskolhe	A.Maraskolhe	A.Maraskolhe
6	ASHVINI BHOJRAJ VILLEKAR	A.Villekar	A.Villekar	A.Villekar	A.Villekar	A.Villekar	A.Villekar
7	ASHWINI S. DAHATONDE	A.S.Dahatonde	A.S.Dahatonde	A.S.Dahatonde	A.S.Dahatonde	A.S.Dahatonde	A.S.Dahatonde
8	CHETAN BHASKAR SARDAR	C.B.Sardar	C.B.Sardar	C.B.Sardar	C.B.Sardar	C.B.Sardar	C.B.Sardar
9	DIKSHA GAUTAM INGLE	D.Ingle	D.Ingle	D.Ingle	D.Ingle	D.Ingle	D.Ingle
10	HARSH EKNATH GOPKAR	AB	AB	AB	AB	AB	AB
11	FAUZIYA M. SHAKEEL ANJUM	F.Anjum	F.Anjum	F.Anjum	F.Anjum	F.Anjum	F.Anjum
12	GAYATRI C. RAUT	G.Raut	G.Raut	G.Raut	G.Raut	G.Raut	G.Raut
13	KALYANI S. NEMADE	K.S.Nemade	K.S.Nemade	K.S.Nemade	K.S.Nemade	K.S.Nemade	K.S.Nemade
14	KARAN D. BHARSAKLE	K.Bharsakle	K.Bharsakle	K.Bharsakle	K.Bharsakle	K.Bharsakle	K.Bharsakle
15	MOHAMMAD M.AB. JAVED	M.A.Javed	M.A.Javed	M.A.Javed	M.A.Javed	M.A.Javed	M.A.Javed
16	NEHA FIRDOUS YUSUF SHAH	N.Y.Shah	N.Y.Shah	N.Y.Shah	N.Y.Shah	N.Y.Shah	N.Y.Shah
17	NIKITA RAMESH KANOJE	N.Kanoje	N.Kanoje	N.Kanoje	N.Kanoje	N.Kanoje	N.Kanoje
18	PALLAVI BHIMRAO BORKAR	P.Borkar	P.Borkar	P.Borkar	P.Borkar	P.Borkar	P.Borkar
19	POOJA RAJESH PRANJALE	P.Pranjale	P.Pranjale	P.Pranjale	P.Pranjale	P.Pranjale	P.Pranjale
20	PRAJWAL ARUN RAUT	P.Raut	P.Raut	P.Raut	P.Raut	P.Raut	P.Raut
21	PRATIKSHA GAUTAM GEDAM	P.Gedam	P.Gedam	P.Gedam	P.Gedam	P.Gedam	P.Gedam
22	PRITI DINKAR TAYDE	AB	AB	AB	AB	AB	AB
23	RADHESHAM R. LATEKAR	R.Latekar	R.Latekar	R.Latekar	R.Latekar	R.Latekar	R.Latekar
24	RITESH R. WANKHADE	R.Wankhade	R.Wankhade	R.Wankhade	R.Wankhade	R.Wankhade	R.Wankhade
25	RUTUJA VINOD DESHMUKH	R.Deshmukh	R.Deshmukh	R.Deshmukh	R.Deshmukh	R.Deshmukh	R.Deshmukh
26	SAKSHI RAJU KAWALE	S.R.Kawale	S.R.Kawale	S.R.Kawale	S.R.Kawale	S.R.Kawale	S.R.Kawale
27	SAMIKSHA VILAS INGOLE	S.Ingole	S.Ingole	S.Ingole	S.Ingole	S.Ingole	S.Ingole
28	SANKET VINOD BHAGAT	S.Bhagat	S.Bhagat	S.Bhagat	S.Bhagat	S.Bhagat	S.Bhagat
29	SHIVANI G. ROKADE	S.Rokade	S.Rokade	S.Rokade	S.Rokade	S.Rokade	S.Rokade
30	SHRUTIKA S. KHULE	S.Khule	S.Khule	S.Khule	S.Khule	S.Khule	S.Khule
31	SNEHA DEVKUMAR JAMNIK	S.Jamnik	S.Jamnik	S.Jamnik	S.Jamnik	S.Jamnik	S.Jamnik
32	SNEHAL RAMESH KOLAWALE	AB	AB	AB	AB	AB	AB

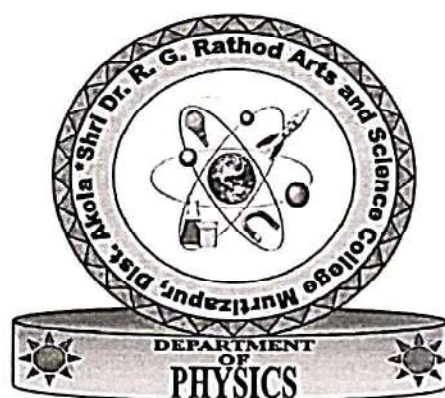


33	TANUJA SANTOSH MULE	<u>Tmule</u>	<u>Tmule</u>	<u>Tmule</u>	<u>Tmule</u>	<u>Tmule</u>	<u>Tmule</u>
34	TEJAL SUNIL KUMBHEKAR	<u>Tkumb</u>	<u>Tkumb</u>	<u>Tkumb</u>	<u>Tkumb</u>	<u>Tkumb</u>	<u>Tkumb</u>
35	TEJASVINEE DEVIDAS GEDAM	<u>T.D.Gedam</u>	<u>T.D.Gedam</u>	<u>T.D.Gedam</u>	<u>T.D.Gedam</u>	<u>T.D.Gedam</u>	<u>T.D.Gedam</u>
36	TEJASWINI G. BHOJANE	<u>Tbhjane</u>	<u>Tbhjane</u>	<u>Tbhjane</u>	<u>Tbhjane</u>	<u>Tbhjane</u>	<u>Tbhjane</u>
37	TEJASWINI R. CHAUDHARI	<u>Tchoudhari</u>	<u>Tchoudhari</u>	<u>Tchoudhari</u>	<u>Tchoudhari</u>	<u>Tchoudhari</u>	<u>Tchoudhari</u>
38	YOGESHWARI S. HIROLE	<u>Yhirole</u>	<u>Yhirole</u>	<u>Yhirole</u>	<u>Yhirole</u>	<u>Yhirole</u>	<u>Yhirole</u>
39	YUKTI VIJAY KALE	<u>Ykale</u>	<u>Ykale</u>	<u>Ykale</u>	<u>Ykale</u>	<u>Ykale</u>	<u>Ykale</u>
40	YUVRAJ INDRAJIT SOLANKE	<u>Ysolanke</u>	<u>Ysolanke</u>	<u>Ysolanke</u>	<u>Ysolanke</u>	<u>Ysolanke</u>	<u>Ysolanke</u>
41	AACHAL SANJAY JAISWAL	<u>A.S.Jaiswal</u>	<u>A.S.Jaiswal</u>	<u>A.S.Jaiswal</u>	<u>A.S.Jaiswal</u>	<u>A.S.Jaiswal</u>	<u>A.S.Jaiswal</u>
42	ABHISHEK VIVEK THAKARE	<u>Atkare</u>	<u>Atkare</u>	<u>Atkare</u>	<u>Atkare</u>	<u>Atkare</u>	<u>Atkare</u>
43	AKANSHA SANJAY KIRTAK	<u>Akirtak</u>	<u>Akirtak</u>	<u>Akirtak</u>	<u>Akirtak</u>	<u>Akirtak</u>	<u>Akirtak</u>
44	ANIKET D. GAWANDE	<u>Agawande</u>	<u>Agawande</u>	<u>Agawande</u>	<u>Agawande</u>	<u>Agawande</u>	<u>Agawande</u>
45	ANUJA GAJANAN INDURKAR	<u>AIndurkar</u>	<u>AIndurkar</u>	<u>AIndurkar</u>	<u>AIndurkar</u>	<u>AIndurkar</u>	<u>AIndurkar</u>
46	ASHLESHA S. LANDE	<u>ASlande</u>	<u>ASlande</u>	<u>ASlande</u>	<u>ASlande</u>	<u>ASlande</u>	<u>ASlande</u>
47	DARSHANA SANDIP THAKARE	<u>DS.Thakare</u>	<u>DS.Thakare</u>	<u>DS.Thakare</u>	<u>DS.Thakare</u>	<u>DS.Thakare</u>	<u>DS.Thakare</u>
48	DEVYANI GIRISH GAWANDE	<u>DGawande</u>	<u>DGawande</u>	<u>DGawande</u>	<u>DGawande</u>	<u>DGawande</u>	<u>DGawande</u>
49	GAURAV RAVINDRA MANE	<u>GRmane</u>	<u>GRmane</u>	<u>GRmane</u>	<u>GRmane</u>	<u>GRmane</u>	<u>GRmane</u>
50	KHUSHAL RAVI LINGMEPELLI	<u>KLingmepelli</u>	<u>KLingmepelli</u>	<u>KLingmepelli</u>	<u>KLingmepelli</u>	<u>KLingmepelli</u>	<u>KLingmepelli</u>
51	KRUSHNALI V. BHALERAO	<u>KBhalerao</u>	<u>KBhalerao</u>	<u>KBhalerao</u>	<u>KBhalerao</u>	<u>KBhalerao</u>	<u>KBhalerao</u>
52	MINAL PREMANAND GADGE	<u>MGadge</u>	<u>MGadge</u>	<u>MGadge</u>	<u>MGadge</u>	<u>MGadge</u>	<u>MGadge</u>
53	NANDINI SACHIN SHARMA	<u>NSharma</u>	<u>NSharma</u>	<u>NSharma</u>	<u>NSharma</u>	<u>NSharma</u>	<u>NSharma</u>
54	PALLAVI SUBHASH TARONE	<u>PTarone</u>	<u>PTarone</u>	<u>PTarone</u>	<u>PTarone</u>	<u>PTarone</u>	<u>PTarone</u>
55	PRANALI SANJAY GAWAI	<u>PGawai</u>	<u>PGawai</u>	<u>PGawai</u>	<u>PGawai</u>	<u>PGawai</u>	<u>PGawai</u>
56	PRESHIT SANJAY DHANDAR	<u>PDhandar</u>	<u>PDhandar</u>	<u>PDhandar</u>	<u>PDhandar</u>	<u>PDhandar</u>	<u>PDhandar</u>
57	RAJESHWARI P. MHASKE	<u>RMhaske</u>	<u>RMhaske</u>	<u>RMhaske</u>	<u>RMhaske</u>	<u>RMhaske</u>	<u>RMhaske</u>
58	RUTUJA BHARAT BAJAD	<u>RBajad</u>	<u>RBajad</u>	<u>RBajad</u>	<u>RBajad</u>	<u>RBajad</u>	<u>RBajad</u>
59	SHREYA GAJANAN SARODE	<u>SSarode</u>	<u>SSarode</u>	<u>SSarode</u>	<u>SSarode</u>	<u>SSarode</u>	<u>SSarode</u>
60	SHREYASH DATTARAJ BHAD	<u>SBhad</u>	<u>SBhad</u>	<u>SBhad</u>	<u>SBhad</u>	<u>SBhad</u>	<u>SBhad</u>
61	SHRUTI GAJANAN INGLE	<u>SIngle</u>	<u>SIngle</u>	<u>SIngle</u>	<u>SIngle</u>	<u>SIngle</u>	<u>SIngle</u>
62	SHUSHMA S. GAWALI	<u>SGawali</u>	<u>SGawali</u>	<u>SGawali</u>	<u>SGawali</u>	<u>SGawali</u>	<u>SGawali</u>
63	TANVI SANTOSH KUKADKAR	<u>TKukadkar</u>	<u>TKukadkar</u>	<u>TKukadkar</u>	<u>TKukadkar</u>	<u>TKukadkar</u>	<u>TKukadkar</u>
64	VIVEK DADARAO WAKODE	<u>VWakode</u>	<u>VWakode</u>	<u>VWakode</u>	<u>VWakode</u>	<u>VWakode</u>	<u>VWakode</u>
65	MUKTA SUNIL MOREY	<u>MSmorey</u>	<u>MSmorey</u>	<u>MSmorey</u>	<u>MSmorey</u>	<u>MSmorey</u>	<u>MSmorey</u>
66	VAISHNAVI VIJAY GOLAM	<u>VGolam</u>	<u>VGolam</u>	<u>VGolam</u>	<u>VGolam</u>	<u>VGolam</u>	<u>VGolam</u>

**Shri. Dr. R. G. Rathod Arts & Science College, Murtizapur, Dist. Akola,  
Maharashtra State, India**

**Affiliated to Sant Gadge Baba Amravati University, Amravati**

**Department of Physics**



**Report of Soft Skill Development**

**Creative Thinking and Reasoning Skill**

**2023 - 24**



Soft Skills is a very popular term nowadays, used to indicate personal transversal competences such as social aptitudes, language and communication capability, friendliness and ability of working in team and other personality traits that characterize relationships between people. Soft Skills are traditionally considered complementary of Hard Skills, which are the abilities to perform a certain type of task or activity. Soft Skills are strategic to be successful in personal and professional life then is essential for the students when they try to obtain any kind of job.

Creative thinking (a companion to critical thinking) is an invaluable skill for college students. It's important because it helps you look at problems and situations from a fresh perspective. Creating thinking is a way to develop novel or unorthodox solutions that do not depend wholly on past or current solutions. It's a way of employing strategies to clear your mind so that your thoughts and ideas can transcend what appear to be the limitations of a problem. Creative thinking is a way of moving beyond barriers.

Reasoning skill is also help students to solve questions based on non-verbal and analytical reasoning, data sufficiency and puzzle. And students will apply different concepts, ideas and methods to solve questions in reasoning and data sufficiency.

The Department of Physics was established in year 2001. The department offers UG program in Physics, having well equipped spacious laboratories for conducting the practical and Research Work. The Objectives of the department is to Projecting the department as a center for Quality education, to Modernizing equipment's and up-gradation of the facilities, to provide facilities and expertise for research work, to promote and motivate faculty to improve qualifications.

In order to improve overall personality of student, Department of Physics was organized soft skill course for B. Sc. III students (Sem V). The main aim was to develop confidence in students and improve their communication skills and reasoning skill during competitive exam. All the session was taken for students to make them understand the importance of Public Speaking and develop stage daring as well. Various activities were run such as Communication Skills, Seminar Presentation Skills, Written Communication, Interpersonal Skills, Group Discussion, Creativity, Leadership, Reasoning Skill, etc. during the course.


These activities benefit the students to enhance the knowledge of use of language and its spoken aspect. It helped the students for their development of communication skills. They learn

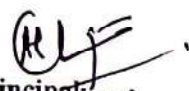
the art of living which helps them in practical life ahead and thus develop interpersonal skills among themselves. The students get participated and perform active role in all activities. These activities benefit the students to enhance the creative capabilities among them. More than 60 students benefitted from it.

Overall, this report highlights the importance of soft skills in personal and professional success and provides valuable insights into how to develop these skills. By focusing on these essential soft skills, individuals can enhance their communication, problem-solving, leadership and emotional intelligence abilities, which can lead to improved job performance and career advancement opportunities.

**Date: 31/10/2023**

  
**In charge**

  
**Head**  
**Department of Physics**

  
**Principal**  
**Shri. Dr. R. G. Rathod Arts & Science**  
**College, Murtizapur, Dist. Akola**



Shri Govindsing Rathod Shikshan Prasarak Mandal, Dahatonda's  
**SHRI DR. R. G. RATHOD ARTS AND SCIENCE COLLEGE, MURTIZAPUR**  
NAAC reaccredited with "B" grade  
**DEPARTMENT OF PHYSICS**

Date 10 Jan 2024


Dear B. Sc. II SEM IV Students,

This is to inform you that, the Department of Physics starting a new Skill Enhancement Certificate Course on, "*Basic Instrumentation Skill*" on 15 Jan 2024, the details of the course and syllabus are displayed on the notice board.

We plan to conduct the lectures and demonstration for the course will be arranged on *Tuesday and Saturday at 2.30 PM every week.*

All must attend lectures and demonstration sessions.

  
10/01/24  
Convenor

  
10/01/24  
Head

  
Principal  
Shri Dr. R. G. Rathod Arts & Science  
College, Murtizapur, Dist. Akola







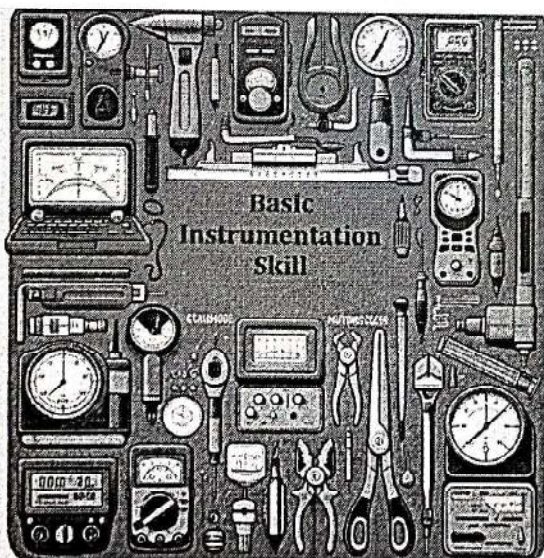
Shri Govindsing Rathod Shikshan Prasarak Mandal, Dahatonda's  
**SHRI DR. R. G. RATHOD ARTS AND SCIENCE COLLEGE, MURTIZAPUR**  
NAAC reaccredited with "B" grade  
**DEPARTMENT OF PHYSICS**

Skill Enhancement Certificate Course on,  
**Basic Instrumentation Skill**

For B. Sc. II Physics Students

Organized by  
**Department of Physics,**  
**Shri. Dr. R. G. Rathod Arts & Science College**  
**Murtizapur, Dist. Akola 444 107, MS India.**

**15 Jan - 15 Apr 2024.**



**BASIC INSTRUMENTATION SKILLS**

This course is to get exposure with various aspects of instrumentation and usage through hands on mode. Here you will find course and relevant material for Skill Enhancement Course (SEC) Basic Instrumentation Skill





Shri Govindsing Rathod Shikshan Prasarak Mandal, Dahatonda's  
**SHRI DR. R. G. RATHOD ARTS AND SCIENCE COLLEGE, MURTIZAPUR**  
NAAC reaccredited with "B" grade

## **DEPARTMENT OF PHYSICS**

### Skill Enhancement Course on, **Basic Instrumentation Skill**

#### Syllabus

#### Theory and Hands-on Sessions: 30 Lectures

This course is to get exposure to various aspects of instruments and their usage through hands-on mode.

**Basic of Measurement:** Instruments accuracy, precision, sensitivity, resolution range, etc. Errors in measurements and loading effects. Multimeter: Principles of measurement of DC voltage and DC, AC voltage, AC, and resistance. Specifications of a multimeter and their significance. (5 Lectures).

**Electronic Voltmeter:** Advantage over conventional multimeter for voltage measurement to input impedance and sensitivity. Principles of voltage, measurement. Specifications of an electronic Voltmeter/ Multimeter and their significance. (4 Lectures).

**Oscilloscope:** Block diagram of basic CRO. CRT, electrostatic focusing and acceleration, a brief discussion on screen phosphor, and visual persistence. Time base operation, synchronization. Front panel controls. Specifications of CRO and their significance. (6 Lectures).

**Use of CRO:** For the measurement of voltage, frequency, and time period. Special features of dual trace, introduction to digital oscilloscope, probes. 3 Lectures).

**Signal and pulse Generators:** Block diagram, explanation, and specifications of low-frequency signal generator and pulse generator. Brief idea for testing, and specifications. Distortion factor meter, wave analysis. (5 Lectures).

**Digital Multimeter:** Block diagram and working of a digital multimeter. Working principle of time interval, frequency, and period measurement using universal counter/frequency counter, time-based stability, accuracy, and resolution. (5 Lectures).





**SHRI. DR. R. G. RATHOD ARTS & SCIENCE COLLEGE MURTIZAPUR, DIST. AKOLA**  
 Department of Physics

B. Sc. II SEM IV

Attendance Sheet: SKILL ENHANCEMENT CERTIFICATE COURSE

Sr.No.	Name of Students	05/03	09/03	12/03	14/03	19/03	23/03	26/03	30/03	02/04	06/04	13/04	16/04	20/04	23/04
1	Aakanksha Santosh Dhuke	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu
2	Aakanksha Pandurang Lakhode	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu
3	Aditi Shalikharm Yadav	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu
4	Akshata Sarish Bhatkar	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu
5	Akshay Raju Kolhe	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu
6	Anup Gajanan Jogi	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu
7	Dhanashri Sunil Joshi	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu
8	Gayatri Himmatrao Thakare	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu
9	Gaytri Ravindra Indurkar	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu
10	Gunjan Shashikant Dange	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu
11	Janhavi Ganesh Gadge	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu
12	Khushi Damodar Gawande	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu
13	Nupur Deepak Shrikhande	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu
14	Pratiksha Dinesh Dalu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu
15	Rohit Manohar Ingle	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu
16	Ruchita Prakashrao Ingle	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu
17	Rupali Uttamrao Thakare	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu
18	Sakshi Arun Wankhade	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu
19	Sakshi Rajendra Thakare	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu
20	Samruddhi Umesh Varge	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu
21	Sharayu Sharad Pathak	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu
22	Shreyash Harish Dhore	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu
23	Shubham Panjab Sonone	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu
24	Sudharm Avinash Thakare	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu
25	Vijaya Dadarao Shingare	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu
26	Aarti Vasant Kokane	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu
27	Alamas Bin Aqueel Chaus	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu
28	Anushka Bandu Sable	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu
29	Chaitali Balu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu	Akshu





		05/03	09/03	12/03	16/03	19/03	23/03	26/03	30/03	02/04	06/04	13/04	16/04	20/04	22/04
30	Dhiraj Parasram Pawar	<del>DPW</del>	<del>DPW</del>	<del>DPW</del>	<del>DPW</del>	<del>DPW</del>	<del>DPW</del>	<del>DPW</del>	<del>DPW</del>	<del>DPW</del>	<del>DPW</del>	<del>DPW</del>	<del>DPW</del>	<del>DPW</del>	<del>DPW</del>
31	Gauri Vinayak Lokhande	<del>GLK</del>	<del>GLK</del>	<del>GLK</del>	<del>GLK</del>	<del>GLK</del>	<del>GLK</del>	<del>GLK</del>	<del>GLK</del>	<del>GLK</del>	<del>GLK</del>	<del>GLK</del>	<del>GLK</del>	<del>GLK</del>	<del>GLK</del>
32	Gayatri Pramod Waghmare	<del>GPW</del>	<del>GPW</del>	<del>GPW</del>	<del>GPW</del>	<del>GPW</del>	<del>GPW</del>	<del>GPW</del>	<del>GPW</del>	<del>GPW</del>	<del>GPW</del>	<del>GPW</del>	<del>GPW</del>	<del>GPW</del>	<del>GPW</del>
33	Gunjan Sadashiv Dudhane	<del>GSD</del>	<del>GSD</del>	<del>GSD</del>	<del>GSD</del>	<del>GSD</del>	<del>GSD</del>	<del>GSD</del>	<del>GSD</del>	<del>GSD</del>	<del>GSD</del>	<del>GSD</del>	<del>GSD</del>	<del>GSD</del>	<del>GSD</del>
34	Khushi Onkar Sardar	<del>KOS</del>	<del>KOS</del>	<del>KOS</del>	<del>KOS</del>	<del>KOS</del>	<del>KOS</del>	<del>KOS</del>	<del>KOS</del>	<del>KOS</del>	<del>KOS</del>	<del>KOS</del>	<del>KOS</del>	<del>KOS</del>	<del>KOS</del>
35	Kohima Prakash Adsod	<del>KPA</del>	<del>KPA</del>	<del>KPA</del>	<del>KPA</del>	<del>KPA</del>	<del>KPA</del>	<del>KPA</del>	<del>KPA</del>	<del>KPA</del>	<del>KPA</del>	<del>KPA</del>	<del>KPA</del>	<del>KPA</del>	<del>KPA</del>
36	Milka Santosh Gunjal	<del>MSG</del>	<del>MSG</del>	<del>MSG</del>	<del>MSG</del>	<del>MSG</del>	<del>MSG</del>	<del>MSG</del>	<del>MSG</del>	<del>MSG</del>	<del>MSG</del>	<del>MSG</del>	<del>MSG</del>	<del>MSG</del>	<del>MSG</del>
37	Monika Shahurao Shejao	<del>MSH</del>	<del>MSH</del>	<del>MSH</del>	<del>MSH</del>	<del>MSH</del>	<del>MSH</del>	<del>MSH</del>	<del>MSH</del>	<del>MSH</del>	<del>MSH</del>	<del>MSH</del>	<del>MSH</del>	<del>MSH</del>	<del>MSH</del>
38	Neha Ganesh Pande	<del>NGP</del>	<del>NGP</del>	<del>NGP</del>	<del>NGP</del>	<del>NGP</del>	<del>NGP</del>	<del>NGP</del>	<del>NGP</del>	<del>NGP</del>	<del>NGP</del>	<del>NGP</del>	<del>NGP</del>	<del>NGP</del>	<del>NGP</del>
39	Nikita Dilip Sardar	<del>NSD</del>	<del>NSD</del>	<del>NSD</del>	<del>NSD</del>	<del>NSD</del>	<del>NSD</del>	<del>NSD</del>	<del>NSD</del>	<del>NSD</del>	<del>NSD</del>	<del>NSD</del>	<del>NSD</del>	<del>NSD</del>	<del>NSD</del>
40	Nikita Ravindra Waghmare	<del>NRW</del>	<del>NRW</del>	<del>NRW</del>	<del>NRW</del>	<del>NRW</del>	<del>NRW</del>	<del>NRW</del>	<del>NRW</del>	<del>NRW</del>	<del>NRW</del>	<del>NRW</del>	<del>NRW</del>	<del>NRW</del>	<del>NRW</del>
41	Nisha Panjabrao Wankhade	<del>NPW</del>	<del>NPW</del>	<del>NPW</del>	<del>NPW</del>	<del>NPW</del>	<del>NPW</del>	<del>NPW</del>	<del>NPW</del>	<del>NPW</del>	<del>NPW</del>	<del>NPW</del>	<del>NPW</del>	<del>NPW</del>	<del>NPW</del>
42	Om Sanjay Bhatkar	<del>OSB</del>	<del>OSB</del>	<del>OSB</del>	<del>OSB</del>	<del>OSB</del>	<del>OSB</del>	<del>OSB</del>	<del>OSB</del>	<del>OSB</del>	<del>OSB</del>	<del>OSB</del>	<del>OSB</del>	<del>OSB</del>	<del>OSB</del>
43	Prachi Prakash Thakare	<del>PTP</del>	<del>PTP</del>	<del>PTP</del>	<del>PTP</del>	<del>PTP</del>	<del>PTP</del>	<del>PTP</del>	<del>PTP</del>	<del>PTP</del>	<del>PTP</del>	<del>PTP</del>	<del>PTP</del>	<del>PTP</del>	<del>PTP</del>
44	Prajwal Wamanrao Wankhade	<del>PWW</del>	<del>PWW</del>	<del>PWW</del>	<del>PWW</del>	<del>PWW</del>	<del>PWW</del>	<del>PWW</del>	<del>PWW</del>	<del>PWW</del>	<del>PWW</del>	<del>PWW</del>	<del>PWW</del>	<del>PWW</del>	<del>PWW</del>
45	Pranav Pramod Atote	<del>PAW</del>	<del>PAW</del>	<del>PAW</del>	<del>PAW</del>	<del>PAW</del>	<del>PAW</del>	<del>PAW</del>	<del>PAW</del>	<del>PAW</del>	<del>PAW</del>	<del>PAW</del>	<del>PAW</del>	<del>PAW</del>	<del>PAW</del>
46	Pranita Prakash Wanare	<del>PWP</del>	<del>PWP</del>	<del>PWP</del>	<del>PWP</del>	<del>PWP</del>	<del>PWP</del>	<del>PWP</del>	<del>PWP</del>	<del>PWP</del>	<del>PWP</del>	<del>PWP</del>	<del>PWP</del>	<del>PWP</del>	<del>PWP</del>
47	Pratima Vijaynath Pandey	<del>PVP</del>	<del>PVP</del>	<del>PVP</del>	<del>PVP</del>	<del>PVP</del>	<del>PVP</del>	<del>PVP</del>	<del>PVP</del>	<del>PVP</del>	<del>PVP</del>	<del>PVP</del>	<del>PVP</del>	<del>PVP</del>	<del>PVP</del>
48	Sakshi Pramod Kokane	<del>SKP</del>	<del>SKP</del>	<del>SKP</del>	<del>SKP</del>	<del>SKP</del>	<del>SKP</del>	<del>SKP</del>	<del>SKP</del>	<del>SKP</del>	<del>SKP</del>	<del>SKP</del>	<del>SKP</del>	<del>SKP</del>	<del>SKP</del>
49	Sakshi Ramkrushna Pathare	<del>SRP</del>	<del>SRP</del>	<del>SRP</del>	<del>SRP</del>	<del>SRP</del>	<del>SRP</del>	<del>SRP</del>	<del>SRP</del>	<del>SRP</del>	<del>SRP</del>	<del>SRP</del>	<del>SRP</del>	<del>SRP</del>	<del>SRP</del>
50	Sakshi Sanjay Bharaskar	<del>SSB</del>	<del>SSB</del>	<del>SSB</del>	<del>SSB</del>	<del>SSB</del>	<del>SSB</del>	<del>SSB</del>	<del>SSB</del>	<del>SSB</del>	<del>SSB</del>	<del>SSB</del>	<del>SSB</del>	<del>SSB</del>	<del>SSB</del>
51	Samiksha Kailas Wankhade	<del>SWK</del>	<del>SWK</del>	<del>SWK</del>	<del>SWK</del>	<del>SWK</del>	<del>SWK</del>	<del>SWK</del>	<del>SWK</del>	<del>SWK</del>	<del>SWK</del>	<del>SWK</del>	<del>SWK</del>	<del>SWK</del>	<del>SWK</del>
52	Sanskriti Satish Wagh	<del>SSW</del>	<del>SSW</del>	<del>SSW</del>	<del>SSW</del>	<del>SSW</del>	<del>SSW</del>	<del>SSW</del>	<del>SSW</del>	<del>SSW</del>	<del>SSW</del>	<del>SSW</del>	<del>SSW</del>	<del>SSW</del>	<del>SSW</del>
53	Saurabh Vinod Nerkar	<del>SVN</del>	<del>SVN</del>	<del>SVN</del>	<del>SVN</del>	<del>SVN</del>	<del>SVN</del>	<del>SVN</del>	<del>SVN</del>	<del>SVN</del>	<del>SVN</del>	<del>SVN</del>	<del>SVN</del>	<del>SVN</del>	<del>SVN</del>
54	Sejal Raju Pache	<del>SRP</del>	<del>SRP</del>	<del>SRP</del>	<del>SRP</del>	<del>SRP</del>	<del>SRP</del>	<del>SRP</del>	<del>SRP</del>	<del>SRP</del>	<del>SRP</del>	<del>SRP</del>	<del>SRP</del>	<del>SRP</del>	<del>SRP</del>
55	Shrutika Rajendra Warokar	<del>SRW</del>	<del>SRW</del>	<del>SRW</del>	<del>SRW</del>	<del>SRW</del>	<del>SRW</del>	<del>SRW</del>	<del>SRW</del>	<del>SRW</del>	<del>SRW</del>	<del>SRW</del>	<del>SRW</del>	<del>SRW</del>	<del>SRW</del>
56	Shweta Pradip Gawali	<del>SPG</del>	<del>SPG</del>	<del>SPG</del>	<del>SPG</del>	<del>SPG</del>	<del>SPG</del>	<del>SPG</del>	<del>SPG</del>	<del>SPG</del>	<del>SPG</del>	<del>SPG</del>	<del>SPG</del>	<del>SPG</del>	<del>SPG</del>
57	Sujal Santosh Shriwas	<del>SSS</del>	<del>SSS</del>	<del>SSS</del>	<del>SSS</del>	<del>SSS</del>	<del>SSS</del>	<del>SSS</del>	<del>SSS</del>	<del>SSS</del>	<del>SSS</del>	<del>SSS</del>	<del>SSS</del>	<del>SSS</del>	<del>SSS</del>
58	Suraj Raju Bhatkar	<del>SRB</del>	<del>SRB</del>	<del>SRB</del>	<del>SRB</del>	<del>SRB</del>	<del>SRB</del>	<del>SRB</del>	<del>SRB</del>	<del>SRB</del>	<del>SRB</del>	<del>SRB</del>	<del>SRB</del>	<del>SRB</del>	<del>SRB</del>
59	Swati Manik Rakhonde	<del>SMR</del>	<del>SMR</del>	<del>SMR</del>	<del>SMR</del>	<del>SMR</del>	<del>SMR</del>	<del>SMR</del>	<del>SMR</del>	<del>SMR</del>	<del>SMR</del>	<del>SMR</del>	<del>SMR</del>	<del>SMR</del>	<del>SMR</del>
60	Tanujay Shankarrao Ambalkar	<del>TSA</del>	<del>TSA</del>	<del>TSA</del>	<del>TSA</del>	<del>TSA</del>	<del>TSA</del>	<del>TSA</del>	<del>TSA</del>	<del>TSA</del>	<del>TSA</del>	<del>TSA</del>	<del>TSA</del>	<del>TSA</del>	<del>TSA</del>
61	Vijaykumar Mahalle	<del>VM</del>	<del>VM</del>	<del>VM</del>	<del>VM</del>	<del>VM</del>	<del>VM</del>	<del>VM</del>	<del>VM</del>	<del>VM</del>	<del>VM</del>	<del>VM</del>	<del>VM</del>	<del>VM</del>	<del>VM</del>
62	Vishal Sahadeo Wankhade	<del>VSW</del>	<del>VSW</del>	<del>VSW</del>	<del>VSW</del>	<del>VSW</del>	<del>VSW</del>	<del>VSW</del>	<del>VSW</del>	<del>VSW</del>	<del>VSW</del>	<del>VSW</del>	<del>VSW</del>	<del>VSW</del>	<del>VSW</del>



*Amrutesh*

*[Signature]*



**SHRI. DR. R. G. RATHOD ARTS & SCIENCE COLLEGE MURTIZAPUR, DIST. AKOLA**  
Department of Physics

B. Sc. II SEM IV

Attendance Sheet: SKILL ENHANCEMENT CERTIFICATE COURSE

Sr.No.	Name of Students	16/01	20/01	23/01	27/01	30/01	03/02	06/02	10/02	13/02	17/02	20/02	24/02	27/02	02/03
1	Aakanksha Santosh Dhuke	A Dhuke		A Dhuke	A Dhuke		A Dhuke	A Dhuke	A Dhuke	A Dhuke	A Dhuke	A Dhuke	A Dhuke	A Dhuke	
2	Aakansha Pandurang Lakhode	A Lakhode	A Lakhode	A Lakhode	A Lakhode	A Lakhode	A Lakhode	A Lakhode	A Lakhode	A Lakhode	A Lakhode	A Lakhode	A Lakhode	A Lakhode	A Lakhode
3	Aditi Shalikarm Yadav	A Yadav	A Yadav	A Yadav	A Yadav	A Yadav	A Yadav	A Yadav	A Yadav	A Yadav	A Yadav	A Yadav	A Yadav	A Yadav	A Yadav
4	Akshata Satish Bhatkar	A Bhatkar	A Bhatkar	A Bhatkar	A Bhatkar	A Bhatkar	A Bhatkar	A Bhatkar	A Bhatkar	A Bhatkar	A Bhatkar	A Bhatkar	A Bhatkar	A Bhatkar	A Bhatkar
5	Akshay Raju Kolhe	A Kolhe		A Kolhe	A Kolhe	A Kolhe	A Kolhe		A Kolhe	A Kolhe	A Kolhe	A Kolhe	A Kolhe	A Kolhe	A Kolhe
6	Anup Gajanan Jogi														
7	Dhanashri Sunil Joshi	D Joshi	D Joshi	D Joshi	D Joshi	D Joshi			D Joshi	D Joshi	D Joshi	D Joshi	D Joshi	D Joshi	D Joshi
8	Gayatri Himmatrao Thakare	G Thakare	G Thakare		G Thakare	G Thakare	G Thakare	G Thakare	G Thakare	G Thakare		G Thakare	G Thakare	G Thakare	G Thakare
9	Gaytri Ravindra Indurkar	G Indurkar	G Indurkar	G Indurkar	G Indurkar	G Indurkar	G Indurkar	G Indurkar	G Indurkar		G Indurkar	G Indurkar	G Indurkar	G Indurkar	G Indurkar
10	Gunjan Shashikant Dange	G Dange	G Dange		G Dange	G Dange	G Dange	G Dange	G Dange	G Dange	G Dange	G Dange	G Dange	G Dange	G Dange
11	Janhavi Ganesh Gadge	J Gadge	J Gadge	J Gadge	J Gadge	J Gadge	J Gadge	J Gadge	J Gadge	J Gadge	J Gadge	J Gadge	J Gadge	J Gadge	J Gadge
12	Khushi Damodar Gawande	K Gawande	K Gawande	K Gawande	K Gawande	K Gawande	K Gawande	K Gawande	K Gawande	K Gawande	K Gawande	K Gawande	K Gawande	K Gawande	K Gawande
13	Nupur Deepak Shrikhande	N Shrikhande	N Shrikhande	N Shrikhande	N Shrikhande	N Shrikhande	N Shrikhande	N Shrikhande	N Shrikhande	N Shrikhande	N Shrikhande	N Shrikhande	N Shrikhande	N Shrikhande	N Shrikhande
14	Pratiksha Dinesh Dalu	P Dalu	P Dalu		P Dalu	P Dalu	P Dalu	P Dalu	P Dalu	P Dalu	P Dalu	P Dalu	P Dalu	P Dalu	P Dalu
15	Rohit Manohar Ingle	R Ingle	R Ingle		R Ingle	R Ingle	R Ingle	R Ingle	R Ingle	R Ingle	R Ingle	R Ingle	R Ingle	R Ingle	R Ingle
16	Ruchita Prakashrao Ingle	R Ingle	R Ingle	R Ingle		R Ingle		R Ingle	R Ingle	R Ingle	R Ingle	R Ingle	R Ingle	R Ingle	R Ingle
17	Rupali Uttamrao Thakare	R Thakare	R Thakare	R Thakare	R Thakare	R Thakare	R Thakare	R Thakare	R Thakare	R Thakare	R Thakare	R Thakare	R Thakare	R Thakare	R Thakare
18	Sakshi Arun Wankhade	S Wankhade	S Wankhade	S Wankhade	S Wankhade	S Wankhade	S Wankhade	S Wankhade	S Wankhade	S Wankhade	S Wankhade	S Wankhade	S Wankhade	S Wankhade	S Wankhade
19	Sakshi Rajendra Thakare	S Thakare	S Thakare	S Thakare	S Thakare	S Thakare	S Thakare	S Thakare	S Thakare	S Thakare	S Thakare	S Thakare	S Thakare	S Thakare	S Thakare
20	Samruddhi Umesh Varge	S Varge	S Varge	S Varge	S Varge	S Varge	S Varge	S Varge	S Varge	S Varge	S Varge	S Varge	S Varge	S Varge	S Varge
21	Sharayu Sharad Pathak	S Pathak	S Pathak	S Pathak	S Pathak	S Pathak	S Pathak	S Pathak	S Pathak	S Pathak	S Pathak	S Pathak	S Pathak	S Pathak	S Pathak
22	Shreyash Harish Dhere	S Dhere	S Dhere		S Dhere	S Dhere	S Dhere	S Dhere	S Dhere	S Dhere	S Dhere	S Dhere	S Dhere	S Dhere	S Dhere
23	Shubham Panjab Sonone	S Sonone	S Sonone	S Sonone	S Sonone	S Sonone	S Sonone	S Sonone	S Sonone	S Sonone	S Sonone	S Sonone	S Sonone	S Sonone	S Sonone
24	Sudharm Avinash Thakare														
25	Vijaya Dadarao Shingare	V Shingare	V Shingare	V Shingare	V Shingare	V Shingare	V Shingare	V Shingare	V Shingare	V Shingare	V Shingare	V Shingare	V Shingare	V Shingare	V Shingare
26	Aarti Vasant Kokane	A Kokane	A Kokane	A Kokane	A Kokane	A Kokane	A Kokane	A Kokane	A Kokane	A Kokane	A Kokane	A Kokane	A Kokane	A Kokane	A Kokane
27	Alamas Bin Aqueel Chaus	A Chaus	A Chaus	A Chaus	A Chaus	A Chaus	A Chaus	A Chaus	A Chaus	A Chaus	A Chaus	A Chaus	A Chaus	A Chaus	A Chaus
28	Anushka Bandu Sable	A Sable	A Sable	A Sable	A Sable	A Sable	A Sable	A Sable	A Sable	A Sable	A Sable	A Sable	A Sable	A Sable	A Sable
29	Chaitali Bapu Ingle	C Ingle	C Ingle	C Ingle	C Ingle	C Ingle	C Ingle	C Ingle	C Ingle	C Ingle	C Ingle	C Ingle	C Ingle	C Ingle	C Ingle





	16/01	20/01	23/01	27/01	30/01	03/02	06/02	10/02	13/02	17/02	20/02	24/02	27/02	02/03
30	Dhiraj Parasram Pawar	DPW	DPW	DPW	DPW	DPW	DPW	DPW	DPW	DPW	DPW	DPW	DPW	DPW
31	Gauri Vinayak Lokhande	GLK	GLK	GLK	GLK	GLK	GLK	GLK	GLK	GLK	GLK	GLK	GLK	GLK
32	Gayatri Pramod Waghmare	GPM	GPM	GPM	GPM	GPM	GPM	GPM	GPM	GPM	GPM	GPM	GPM	GPM
33	Gunjan Sadashiv Dudhane	GSD	GSD	GSD	GSD	GSD	GSD	GSD	GSD	GSD	GSD	GSD	GSD	GSD
34	Khushi Onkar Sardar	KOS	KOS	KOS	KOS	KOS	KOS	KOS	KOS	KOS	KOS	KOS	KOS	KOS
35	Kohima Prakash Adsod	KPA	KPA	KPA	KPA	KPA	KPA	KPA	KPA	KPA	KPA	KPA	KPA	KPA
36	Milka Santosh Gunjal	MNG	MNG	MNG	MNG	MNG	MNG	MNG	MNG	MNG	MNG	MNG	MNG	MNG
37	Monika Shahurao Shejao	MSH	MSH	MSH	MSH	MSH	MSH	MSH	MSH	MSH	MSH	MSH	MSH	MSH
38	Neha Ganesh Pande	NGP	NGP	NGP	NGP	NGP	NGP	NGP	NGP	NGP	NGP	NGP	NGP	NGP
39	Nikita Dilip Sardar	NSD	NSD	NSD	NSD	NSD	NSD	NSD	NSD	NSD	NSD	NSD	NSD	NSD
40	Nikita Ravindra Waghmare	NRW	NRW	NRW	NRW	NRW	NRW	NRW	NRW	NRW	NRW	NRW	NRW	NRW
41	Nisha Panjabrao Wankhade	NPW	NPW	NPW	NPW	NPW	NPW	NPW	NPW	NPW	NPW	NPW	NPW	NPW
42	Om Sanjay Bhatkar	OSB	OSB	OSB	OSB	OSB	OSB	OSB	OSB	OSB	OSB	OSB	OSB	OSB
43	Prachi Prakash Thakare	PTK	PTK	PTK	PTK	PTK	PTK	PTK	PTK	PTK	PTK	PTK	PTK	PTK
44	Prajwal Wamanrao Wankhade	PWW	PWW	PWW	PWW	PWW	PWW	PWW	PWW	PWW	PWW	PWW	PWW	PWW
45	Pranav Pramod Atote	PAI	PAI	PAI	PAI	PAI	PAI	PAI	PAI	PAI	PAI	PAI	PAI	PAI
46	Pranita Prakash Wanare	PWN	PWN	PWN	PWN	PWN	PWN	PWN	PWN	PWN	PWN	PWN	PWN	PWN
47	Pratima Vijaynath Pandey	PVP	PVP	PVP	PVP	PVP	PVP	PVP	PVP	PVP	PVP	PVP	PVP	PVP
48	Sakshi Pramod Kokane	SKK	SKK	SKK	SKK	SKK	SKK	SKK	SKK	SKK	SKK	SKK	SKK	SKK
49	Sakshi Ramkrushna Pathare	SRP	SRP	SRP	SRP	SRP	SRP	SRP	SRP	SRP	SRP	SRP	SRP	SRP
50	Sakshi Sanjay Bharaskar	SSB	SSB	SSB	SSB	SSB	SSB	SSB	SSB	SSB	SSB	SSB	SSB	SSB
51	Samiksha Kailas Wankhade	SKW	SKW	SKW	SKW	SKW	SKW	SKW	SKW	SKW	SKW	SKW	SKW	SKW
52	Sanskriti Satish Wagh	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW
53	Saurabh Vinod Nerkar	SVN	SVN	SVN	SVN	SVN	SVN	SVN	SVN	SVN	SVN	SVN	SVN	SVN
54	Sejal Raju Pache	SRP	SRP	SRP	SRP	SRP	SRP	SRP	SRP	SRP	SRP	SRP	SRP	SRP
55	Shrutika Rajendra Warokar	SRW	SRW	SRW	SRW	SRW	SRW	SRW	SRW	SRW	SRW	SRW	SRW	SRW
56	Shweta Pradip Gawali	SPG	SPG	SPG	SPG	SPG	SPG	SPG	SPG	SPG	SPG	SPG	SPG	SPG
57	Sujal Santosh Shriwas	SSS	SSS	SSS	SSS	SSS	SSS	SSS	SSS	SSS	SSS	SSS	SSS	SSS
58	Suraj Raju Bhatkar	SUR	SUR	SUR	SUR	SUR	SUR	SUR	SUR	SUR	SUR	SUR	SUR	SUR
59	Swati Manik Rakhonde	SMR	SMR	SMR	SMR	SMR	SMR	SMR	SMR	SMR	SMR	SMR	SMR	SMR
60	Tanmay Shankarrao Ambalkar	TSA	TSA	TSA	TSA	TSA	TSA	TSA	TSA	TSA	TSA	TSA	TSA	TSA
61	Vaishnavi Prakash Mahalle	VPM	VPM	VPM	VPM	VPM	VPM	VPM	VPM	VPM	VPM	VPM	VPM	VPM
62	Vishal Sahadeo Wankhade	VSW	VSW	VSW	VSW	VSW	VSW	VSW	VSW	VSW	VSW	VSW	VSW	VSW



*Signature*

*Signature*

**SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI**

**Year 2023-24**

**Shri. Dr. R. G. Rathod Arts & Science College Murtizapur, Dist.-Akola 444107**

***Department of Chemistry***

**Notice**

All M. Sc I<sup>st</sup> & II<sup>nd</sup> year students are hereby informed that **Short-term Certificate Course in Hands on Training of Basic Chemistry Softwares- CHEMDRAW, ACD ChemSketch & NMR Processor** will be conducted from **02-09-2023 to 26-10-2023**. This Course is useful to learn chemistry softwares.

*Mujahid*

Co-ordinator

**Dr. Mohd Mujahid**

*[Signature]*  
Head of Department  
Head & Associate Professor  
Department of Chemistry  
**Dr. D. B. Dupare**  
Shri. Dr. R. G. Rathod Arts & Science  
College, Murtizapur, Dist. Akola

*[Signature]*  
Principal  
**Principal**  
Shri. Dr. R. G. Rathod Arts & Science  
College, Murtizapur, Dist. Akola

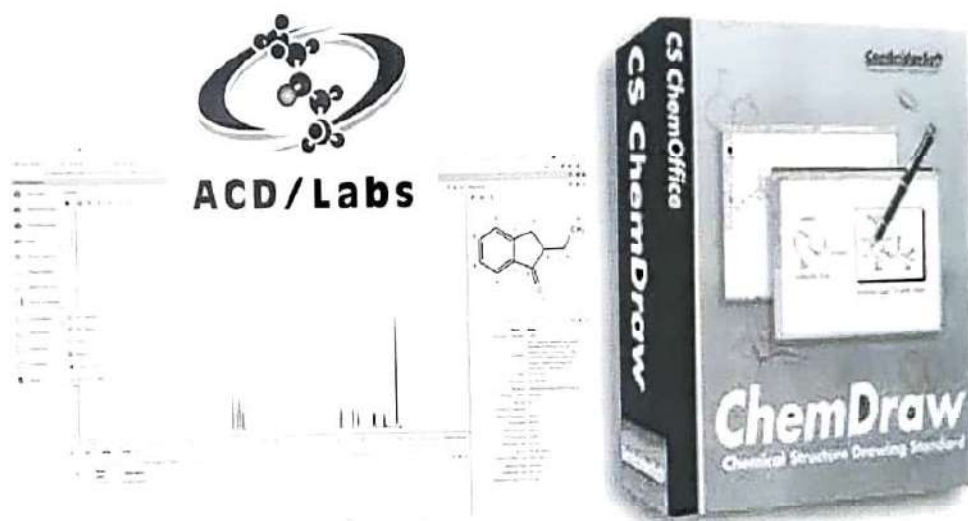


**Shri. Dr. R. G. Rathod Arts and Science College Murtizapur  
Dist. Akola**

**Short-term Certificate Course in Hands on Training of Basic  
Chemistry Softwares- CHEMDRAW, ACD ChemSketch & NMR  
Processor**

**FOR PG STUDENTS OF CHEMISTRY**

**Course duration: 30 hours**



**Registration Fee: Nil**

**Mode: Offline**

**Last date for applying: 01/09/2023**

**Registration form: <https://forms.gle/xuD7YU1rf4E366wt9>**

**Organized by:**

Department of Chemistry

Shri. Dr. R. G. Rathod Arts and Science College

Murtizapur Dist. Akola

Maharashtra 444701

E-mail: [artssciencecollege@rediffmail.com](mailto:artssciencecollege@rediffmail.com)

Website: <https://rgrcollmzr.ac.in/>



**SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI**

**Year 2023-24**

**Shri. Dr. R. G. Rathod Arts & Science College Murtizapur, Dist.-Akola 444107**

***Department of Chemistry***

**Course Content**

**CS ChemOffice (Theoretical & Practical)**

**Module 1: Cambridge ChemDraw Ultra software (Theoretical & Practical)-14 hours**

**Topics to be covered:**

- Introduction
- Download and installation process
- Drawing various chemical structures (acyclic, cyclic, aromatic, polycyclic, heterocyclic)
- Nomenclature generation & conversion of name into molecular structure
- Calculation of physical properties such as density, molecular weight, molecular formula, refractive index from structural formula.
- $^1\text{H}$ ,  $^{13}\text{C}$  NMR prediction from molecular structure
- Drawing structure of bigger molecules such as proteins, carbohydrates, and RNA/DNA, bio arts, use of templates

**Learning outcomes:-** After successful completion of this module candidate will be able to use Cambridge ChemDraw Ultra for generation, processing and calculation of physical/chemical properties of simple and complex molecules.

**ACD/LABS (Theoretical & Practical)**

**Module 2: ACD ChemSketch software -06 hours**

**Topics to be covered:**

- Introduction
- Download and installation process
- Drawing various chemical structures (acyclic, cyclic, aromatic, polycyclic, heterocyclic)
- Generation of name from structure & conversion of name into molecular structure
- Calculation of physical properties such as density, molecular weight, molecular formula, refractive index from structural formula.

**Learning outcomes:-** After successful completion of this module candidate will be able to use ACD ChemSketch for generation and processing of simple and complex chemical structures.

### Module 3: ACD NMR Processor -10 hours

#### Topics to be covered:

- Accessing  $^1\text{H}$  NMR files
- Peak Picking & labeling  $^1\text{H}$  peaks
- Integration of selected peaks
- Identifying solvent peaks
- Calculating coupling constant
- Accessing  $^{13}\text{C}$  NMR files
- Peak Picking & labeling  $^{13}\text{C}$  peaks
- Distinguishing  $\text{CH}_2$  &  $\text{CH}$  or  $\text{CH}_3$  from DEPT
- Identifying quaternary carbon

**Learning outcomes:-** After successful completion of this module candidate will be able to use ACD NMR Processor for the analysis of proton and carbon NMR data for solving simple and complex chemical structures.

**SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI**

**Year 2023-24**

**Shri. Dr. R. G. Rathod Arts & Science College Murtizapur, Dist.-Akola 444107**

***Department of Chemistry***

**Salient features of certificate course:**

- Theory and practical sessions as per curriculum
- Lectures include entire process of downloading and installation of this software.
- Hands on training on this software
- At end of course students will be able to use these open source software's independently for their work.
- Students can do the analysis of actual NMR files for molecular structure determination.
- E-certificates will be issued to the successful candidates

**Who can apply:**

M.Sc. (Chemistry) 1<sup>st</sup> & 2<sup>nd</sup> year students are eligible to apply for this course.

**Number of seats-30**

**Structure (4 hours per week)**

Content	Hours
Theory	10
Practical	20

**Examination**

Theory: 30 Marks (1 hour)

Practical: 20 Marks (2 hours)

Total: 50 Marks

### Evaluation Process

The examination criteria for both theory and practical mode will be evaluated as per grade system

"A" Grade: 41-50 Marks

"B" Grade: 31-40 Marks

"C" Grade: 21-30 Marks

All successful candidates will be awarded with *E*-certificates.

### Organizing Committee

**Dr. A. P. Charjan**  
Convener

**Dr. Mohd Mujahid**  
Course Co-ordinator

**Dr. S. V. Deshmukh**  
Organizing Secretary

### Approved By

**Head of the Department:** Shri. Dr. R. G. Rathod Arts & Science College Murtizapur

**The Principal:** Shri. Dr. R. G. Rathod Arts & Science College Murtizapur



Co-ordinator

**Dr. Mohd Mujahid**



Head of Department

**Head & Associate Professor**  
**Department Of Chemistry**  
**Shri. Dr. R. G. Rathod Arts & Science**  
**College, Murtizapur, Dist. Akr.**



Principal



**SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI**

Year 2023-24

Shri. Dr. R. G. Rathod Arts &amp; Science College Murtizapur, Dist.-Akola 444107

**Department of Chemistry****Teaching Plan**

Sr.No	Date/Day	Module/Topics Planned
1	22/09/2023 Saturday	Module 1: Cambridge ChemDraw Ultra software Introduction to the chemistry softwares, Download and installation process
2	6/09/2023 Wednesday	Drawing various chemical structures (acyclic, cyclic, aromatic, polycyclic, heterocyclic)
3	09/09/2023 Saturday	Nomenclature generation & conversion of name into molecular structure, Chemical analysis
4	13/09/2023 Wednesday	Calculation of physical properties such as density, molecular weight, molecular formula, refractive index from structural formula
5	16/09/2023 Saturday	$^1\text{H}$ , $^{13}\text{C}$ NMR prediction from molecular structure
6	23/09/2023 Saturday	Drawing structure of bigger molecules such as proteins, carbohydrates, and RNA/DNA, bio arts, use of templates
7	27/09/2023 Wednesday	Practice session
8	30/09/2023 Saturday	Module 2: ACD ChemSketch software Introduction to the software, Download and installation process, Drawing various chemical structures (acyclic, cyclic, aromatic, polycyclic, heterocyclic)
9	04/10/2023 Wednesday	Generation of name from structure & conversion of name into molecular structure, Calculation of physical properties such as density, molecular weight, molecular formula, refractive index from structural formula
10	07/10/2023 Saturday	Practice session
11	11/10/2023 Wednesday	Module 3: ACD NMR Processor Introduction to the software, Accessing $^1\text{H}$ NMR files, Peak Picking & labeling $^1\text{H}$ peaks
12	14/10/2023 Saturday	Integration of selected peaks, Identifying solvent peaks
13	18/10/2023 Wednesday	Calculating coupling constant, Accessing $^{13}\text{C}$ NMR files, Peak Picking & labeling $^{13}\text{C}$ peaks, Distinguishing $\text{CH}_2$ & $\text{CH}$ or $\text{CH}_3$ from DEPT, Identifying quaternary carbon
14	21/10/2023 Saturday	Practice session
15	28/10/2023 Wednesday	EXAM

SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI

Year 2023-24, Winter

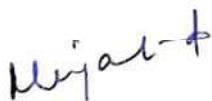
Shri. Dr. R. G. Rathod Arts & Science College Murtizapur, Dist.-Akola  
444107

Department of Chemistry

**Notice**

Short-term Certificate Course in Hands on Training of Basic Chemistry  
Softwares- CHEMDRAW, ACD ChemSketch & NMR Processor

All M. Sc I<sup>st</sup> & II<sup>nd</sup> Year students are hereby informed that examination for Certificate Course (Theory & Practical) will be conducted on the 28<sup>th</sup> October 2023. The examination will be of 50 marks (Theory: 30 marks & Practical: 20 marks).



Co-ordinator

Dr. Mohd Mujahid



Head of Department  
Head & Associate Professor  
Department of Chemistry  
Shri. Dr. R. G. Rathod Arts & Science  
College, Murtizapur, Dist. Akola



Principal  
Shri. Dr. R. G. Rathod Arts & Science  
College, Murtizapur, Dist. Akola

# SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI

Year 2023-24, Winter

Shri. Dr. R. G. Rathod Arts & Science College Murtizapur, Dist.-Akola 444107

Department of Chemistry

Class: M.Sc. I<sup>st</sup> & II<sup>nd</sup>

## Registration of students through Google forms

Chendraw 2023-24 (Registration)

File Edit View Insert Format Data Tools Extensions Help

10 Bold Ctrl+B

Sl. No.	Registration No.	Name	Father's Name	Class	Address	Email
1	10/9/2023 16:27:24	Vachhav	Chandras	M.sc 2 <sup>nd</sup>	A/ Post hwaro kande TQ murtizapur	vachhavvachhav21@gmail.com
2	10/9/2023 10:33:50	Aparna Jaykumar Rajankar	Jaykumar Dinkrahnra Rajankar	M.sc 2 <sup>nd</sup> year	A/ post kharada	aparnarajankar2022@gmail.com
3	10/9/2023 10:00:10	Sakshi Manoj Mahajan	Manoj Mahajan	M.Sc 1 <sup>st</sup> year	Old city Morari chowk, Malepura, murtizapur-444107	sakshimahajan740@gmail.com
4	10/9/2023 17:08:12	Sachin Shrinuashna Wasnik	Shrinuashna Wasnik	M.sc 1 <sup>st</sup>	Cramaswari Colony Murtizapur	sachinwasnik111@gmail.com
5	10/9/2023 18:15:33	Mubashira Parim	Naseer Khan	M.sc 2 <sup>nd</sup> year	Mubashirpura Station Area, Murtizapur	mubashirshah1998@gmail.com
6	10/9/2023 18:17:01	Aashish Mahadev Vairya	Mahadev Vairya	M.sc 1 <sup>st</sup> year	At post pringh murtizapur dist Akola	ashishvairya1@gmail.com
7	10/9/2023 19:23:57	ANDILEES WAQAR AHMED	WAQAR AHMED	M.sc 1 <sup>st</sup> year	Station area MURTIAPUR	andileeshahmed5484@gmail.com
8	10/10/2023 9:29:25	Sakshi Suresh Ingole	Suresh	M.sc 1 <sup>st</sup> year	Panchasahi road sun wadi murtizapur	sakshingsole50@gmail.com
9	10/10/2023 12:23:30	Pritya Upakumar	Upak	M.sc 1 <sup>st</sup> year	A/ Kharwad Post durgade la murtizapur Dist akola	prityaupak27@gmail.com
10	10/10/2023 11:14:41	Vishvika	Vanash	M.sc 1 <sup>st</sup> year	A/ Post kharada HJ Murtizapur Dist Akola	prityaupak27@gmail.com
11	10/10/2023 13:58:02	Pallavi Vijay Waskode	Vijay Waskode	M.sc 1 <sup>st</sup> year	A/ Jamath (kh) post halgaon TQ murtizapur Dist akola	Waskodepallavi363@gmail.com
12	10/10/2023 13:28:10	Vaishnavi Ganeshi Dui	Ganeshi Dui	M.sc 1 <sup>st</sup> year	A/ post kharada TQ murtizapur Dist akola	vaishnavidui@gmail.com
13	10/10/2023 14:00:05	Poonam Anand Rajankar	Anand kshirasrab Rajankar	M.sc 2 <sup>nd</sup> year chemistry	A/ post mahat taluka - murtizapur, dist - akola	rajankarpoonam10@gmail.com
14	10/10/2023 15:54:47	Vaishnavi Dinkumar Jankar	Dinkumar	M.Sc 1 <sup>st</sup> year	A/ Post Lakhpur TQ murtizapur	vaishnavijankar@gmail.com
15	10/10/2023 21:10:30	Vandana Wankhade	Wankhade	M.Sc 2 <sup>nd</sup> year	Old city murtizapur	anushkavankhade430@gmail.com
16	10/10/2023 21:28:58	Mohini Mukundarao Gonde	Mukundarao	M.sc 1 <sup>st</sup> year	A/ Post pargal dist-akola, tq- darghewadi	mohinigonde5@gmail.com
17	10/10/2023 14:16:18	Aparna Jaykumar Rajankar	Jaykumar Mukundashra Rajankar	M.sc 1 <sup>st</sup> year	A/ post kharada la Akargawan Dist Akola	aparnarajankar2022@gmail.com
18	10/10/2023 19:30:07	Rohini Dinkumar Rajankar	Dinkumar	M.sc 2 <sup>nd</sup> year	A/ post pargal dist-akola, tq- darghewadi	rohini.dinkar@gmail.com
19	10/26/2023 21:17:12	Arushi Sundhar Tale	Sundhar Jankar Tale	M.sc 2 <sup>nd</sup> year	A/ post. Darghewadi	arushitale015@gmail.com

Form Responses 1

*Mujahid*  
Co-ordinator  
Dr. Mohd Mujahid

*[Signature]*  
Head of the Department  
Head & Associate Professor  
Dr. D.B. Dupare  
Department of Chemistry  
Shri. Dr. R. G. Rathod Arts & Science  
College, Murtizapur, Dist. Akola



# SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI

Year 2023-24, Winter

Shri. Dr. R. G. Rathod Arts & Science College Murtizapur, Dist.-Akola 444107

*Department of Chemistry*

Class: M.Sc. I<sup>st</sup> & II<sup>nd</sup>



Google

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Shri. Dr. R. G. Rathod Arts & Science College Murtizapur, Dist.-Akola

**Department of Chemistry**  
(YEAR 2023-24)

**Mark List**

Sr. No.	Name of the student	Theory (Out of 30)	Practical (Out of 20)	Total Marks (Out of 50)	Grade
1	ANUJA SUNILRAO TALE	22	19	41	A
2	APARNA J. RAJANKAR	28	20	48	A
3	BHAGYASHRI RAVANKAR	22	19	41	A
4	MUBASHIRA KHAN	28	20	48	A
5	PALLAVI VIJAY WAKODE	26	20	46	A
6	POONAM A. RAJURKAR	28	20	48	A
7	SAYALI R. BURGHATE	28	18	46	A
8	SHALMALI V. JAWARE	22	19	41	A
9	VAISHNAVI C. GAWANDE	14	10	24	C
10	VAISHNAVI GANESH GIRI	28	20	48	A
11	VANSHIKA S. WANKHADE	24	19	43	A
12	ANDLEEB WAQAR AHMED	18	10	28	C
13	ASHISH M. VAIDYA	22	19	41	A
14	MOHINI M. GORVE	20	18	38	B
15	PRIYA DIPAK GAWAI	22	18	38	B
16	SACHIN S. WASNIK	18	09	27	C
17	SAKSHI MANOJ MAHAJAN	24	19	43	A
18	SAKSHI SURESH INGLE	22	19	41	A
19	VAIBHAV D. JAMNIK	26	20	46	A

Name of Teacher

Dr. Mohd Mujahid

Signature: Mujahid

Head of Department

Dr. D. B. Dupan  
Head & Associate Professor  
Department Of Chemistry  
Shri. Dr. R. G. Rathod Arts & Science  
College, Murtizapur, Dist. Akola

College  
Seal

Sign of Principal

Shri. Dr. R. G. Rathod Arts & Science  
College, Murtizapur, Dist. Akola



**Shri. Dr. R. G. Rathod Arts and Science College Murtizapur Dist. Akola**

**Short-term Certificate Course in Hands on Training of Basic Chemistry Softwares- CHEMDRAW, ACD ChemSketch &**

**NMR Processor**

**Attendance**

Sr. No	Name of candidate	20/06/20	06/07/20	09/07/20	12/07/20	13/07/20	25/07/20	27/07/20	30/07/20	01/08/20	07/08/20	11/08/20	14/08/20	18/08/20	20/08/20	26/08/20
1.	Vaishnavi Gawande															
2.	Aparna Jaykumar Rajankar	<del>Rajankar</del>	<del>Rajankar</del>	<del>Rajankar</del>	<del>Rajankar</del>	<del>Rajankar</del>										
3.	Sakshi Manoj Mahajan	<del>Sakshi</del>	<del>Sakshi</del>	<del>Sakshi</del>	<del>Sakshi</del>	<del>Sakshi</del>										
4.	Sachin Shrikrushna Wansik															
5.	Mubashira Parvin	<del>Mubashira</del>	<del>Mubashira</del>	<del>Mubashira</del>	<del>Mubashira</del>	<del>Mubashira</del>										
6.	Ashish Mahadev Vaidya	<del>Ashish</del>	<del>Ashish</del>	<del>Ashish</del>	<del>Ashish</del>	<del>Ashish</del>										
7.	ANDLEEB WAQAR AHMED															
8.	Sakshi Suresh Ingle	<del>Sakshi</del>	<del>Sakshi</del>	<del>Sakshi</del>	<del>Sakshi</del>	<del>Sakshi</del>										
9.	Priya Dipak gawai	<del>Priya</del>	<del>Priya</del>	<del>Priya</del>	<del>Priya</del>	<del>Priya</del>										
10.	Pallavi Vijay wakode	<del>Pallavi</del>	<del>Pallavi</del>	<del>Pallavi</del>	<del>Pallavi</del>	<del>Pallavi</del>										
11.	Vaishnavi Ganesh Giri	<del>Vaishnavi</del>	<del>Vaishnavi</del>	<del>Vaishnavi</del>	<del>Vaishnavi</del>	<del>Vaishnavi</del>										

12.	Poonam Arvind Rajurkar	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>
13.	Vaibhav Devkumar Jamnik	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>
14.	Vanshika Wankhade	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>
15.	Mohini Mukundarao Gorve	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>
16.	Bhagyashri Dinesh Ravantkar	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>
17.	Shaimali Vijay Rao Jaware	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>
18.	Anuja Sunil Taje	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>
19.	Sayali Ratu Bhosghate	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>	<del>Bele</del>

*Murli*  
Incharge

*Murli*  
Shri. Dr. R. G. Rathod Arts & Science  
College, Murizapur, Dist. Akola

*Murli*  
Head & Associate Professor  
Department of Chemistry  
Shri. Dr. R. G. Rathod Arts & Science  
College, Murizapur, Dist. Akola

**SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI**

Year 2023-24, Winter

XXXX Shri. Dr. R.G. Rathod Arts & Science College Murtizapur, Dist.-Akola 444107

*Department of Chemistry*

Sub: Chemistry

Class: B.Sc. F Y Sem-I

**Bridge Course**

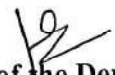
**Notice**

All B. Sc I<sup>st</sup> Year students are hereby informed that Bridge Course will be conducted from **15-07-2023 to 21-07-2023**, Bridge Course, is useful to learn the skills and knowledge of basic chemistry

In essence, Bridge Courses serve as a bridge between where a student is now and where they want to go, helping them overcome obstacles and achieve their goals.

  
Class In charge

Mr. K.D. Nirde  
Dr. S.V. Deshmukh

  
Head of the Department  
Dr. D B Dupare

Read & Associate Professor  
Department of Chemistry  
Shri. Dr. R. G. Rathod Arts & Science  
College, Murtizapur, Dist. Akola





**SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI**

Year 2023-24, Winter

Shri. Dr. R.G. Rathod Arts & Science College Murtizapur, Dist.-Akola 444107

*Department of Chemistry*

Class: B.Sc. FY Sem-I

Sub: Chemistry

**Bridge Course Syllabus**

**1. Inorganic Chemistry**

**1. Periodic Table**

Introduction of S Block, P Block, D Block, F Block Elements

**2. Atomic structure**

Atomic orbitals and concept of atomic orbitals, shaped of s, p and d orbitals, Pauli's exclusion principle, Hund's rule of maximum multiplicity, Aufbau principle, electronic configuration of elements up to atomic number 20.

**3. Introduction to chemical bonding**

Types of chemical bonds with suitable examples, Hydrogen bonding- inter and intramolecular hydrogen bonding, abnormal behavior of water molecule

**2. Organic Chemistry**

**1 Introduction to Organic chemistry**

Importance of organic chemistry, general classification of organic compounds, -Homologous series, functional groups, IUPAC nomenclature of organic compounds (Alkanes, alkenes, alkynes, alcohols, aldehydes, ketones, ethers, acids, esters, amines)

**3. Physical Chemistry**

**1. Chemical Kinetics and Surface Chemistry**

Rate of chemical reaction- Basic idea about collision theory of reaction- Arrhenius equation  
Adsorption vs Absorption-, adsorbent, adsorbate-types of adsorptions- Catalysis - homogeneous and heterogeneous, enzyme catalysis

**2. Thermodynamics**

Extensive and intensive thermodynamic properties – First and Second Laws of TD- Heat capacity and specific heat capacity

# **SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI**

**Year 2023-24, Winter**

**Shri. Dr. R.G. Rathod Arts & Science College Murtizapur, Dist.-Akola 444107**

***Department of Chemistry***

**Class: B.Sc. F Y Sem-I**

**Sub: Chemistry**

## **Bridge Course Objective**

A bridge course for newly admitted students is conducted every year at the very beginning of the first semester for the students of science the prime intention behind this course is to be the gap between the subject studies at the pre university level subject and the program to which the student is admitted to this course attempts to help the admitted students to get acquainted with the basic things related with the selected subject and increase their interest in the same. the course also helps concerned teacher to elevate the students to the next level up understanding of the subject

## **Objective**

- To Prepare newly admitted students for degree Programme
- To bridge the gap between knowledge levels apparent in higher secondary and prescribed University curriculum
- To explain basic concepts in **chemistry** subject
- Increase the interest of students in **chemistry practical's** as well as increase knowledge in **chemistry**
- To help students get equipped with knowledge and confidence in the selected subject.

## **Duration**

The Total Duration of this Bride Course is **7 Day**

## **Syllabus Designed by :**

**Mr. K D Nirde** (Asst-Prof Department of chemistry Shri.Dr.R.G. Rathod. Rathod Arts & Science College Murtizapur)

**Dr. S V Deshmukh** (Asst-Prof Department of chemistry Shri.Dr.R.G. Rathod. Rathod Arts & Science College Murtizapur)

## **Approved By:**

**Head of the Department:** Shri. Dr. R.G. Rathod Arts & Science College Murtizapur)

**The principal:** Shri. Dr. R. G, Rathod Arts & Science College Murtizapur)



**SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI**  
**Year 2023-24, Winter**  
**Shri. Dr. R.G. Rathod Arts & Science College Murtizapur, Dist.-Akola 444107**  
**Department of Chemistry**  
**Class: B.Sc. F Y Sem-I** **Sub: Chemistry**

**Teaching Plan of Bridge Course**

Sr.No	Date /Day	Sub-Module / Units Planned
1	15/07/2023 Saturday	Importance of organic chemistry, general classification of organic compounds, - Homologous series
2	16/07/2023 Sunday	functional groups, IUPAC nomenclature of organic compounds (Alkanes, alkenes, alkynes, alcohols, aldehydes, ketones, ethers, acids, esters, amines)
3	17/07/2023 Monday	Rate of chemical reaction- Basic idea about collision theory of reaction- Arrhenius equation Adsorption vs Absorption-, adsorbent, adsorbate-types of adsorptions- Catalysis - homogeneous and heterogeneous, enzyme catalysis
4	18/07/2023 Tuesday	<b>I.Periodic Table</b> Introduction of S Block, P Block, D Block, F Block Elements
5	19/07/2023 Wednesday	Atomic orbitals and concept of atomic orbitals, shaped of s, p and d orbitals, Pauli's exclusion principle, Hund's rule of maximum multiplicity, Aufbau principle, electronic configuration of elements up to atomic number. <b>Introduction to chemical bonding</b>
6	20/07/2023 Thursday	<b>Thermodynamics</b> Extensive and intensive thermodynamic properties – First and Second Laws of TD- Heat capacity and specific heat capacity
7	21/07/2023 Friday	<b>Bridge Course Test</b>

**Time Table: (15/07/2023 to 21/07/2023)**

Time	15/07/2023 Saturday	16/07/2023 Sunday	17/07/2023 Monday	18/07/2023 Tuesday	19/07/2023 Wednesday	20/07/2023 Thursday	21/07/2023 Friday
08:30 to 10:00	B. Sc -I Sem-I	B. Sc -I Sem-I	B. Sc -I Sem-I	B. Sc -I Sem-I	B. Sc -I Sem-I	B. Sc -I Sem-I	B. Sc -I Sem-I

# SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI

Consolidated Record of internal assessment Marks

Year 2023-24, Winter

Shri. Dr. R.G. Rathod Arts & Science College Murtizapur, Dist.-Akola 444107  
*Department of Chemistry*


Class: B.Sc. F Y Sem-I

Sub: Chemistry

## Notice

### Bridge Course Test

All B. Sc I<sup>st</sup> Year students are hereby inform that Your Bridge Course test will be conducted on the date **21-July-2023**. The examination will be conduct for 20 marks all questions are compulsory, each question's carries one mark.

  
Class In charge

Mr.K.D. Nirde

Dr.S.V. Deshmukh



  
Head of the Department

Dr. D B Dupare

Head & Associate Professor  
Department of Chemistry

Shri. Dr. R. G. Rathod Arts & Science  
College, Murtizapur, Dist. Akola



Shri. Dr. R.G. Rathod Arts & Science College Murtizapur, Dist.-Akola 444107

Department of Chemistry

Year 2023-24 Winter

Class: B.Sc. FY Sem-I  
Time- 1 Hour

Total Marks-20

Sub: Chemistry  
Date: 21/07/2023

**Bridge Course Test Question Paper**

1. Lithium and magnesium are \_\_\_\_\_ metals.  
a) sponge      b) hard      c) soft      d) smooth
2. Which of the following element has the smallest size in its group?  
a) sodium      b) rubidium      c) potassium      d) lithium
3. How many blocks present in periodic table  
a) 3      b) 4      c) 5      d) 2
4. How many elements present in periodic table  
a) 120      b) 118      c) 125      d) 250
5. .... is the most electronegative element in periodic table  
a) Bromine      b) Carbon      c) Fluorine      d) oxygen
6. Noble gases present ..... block.  
a) S-Block      b) P-Block      c) D-Block      d) F-Block
7. How many elements present in S-Block  
a) 12      b) 13      c) 14      d) 15
8. How many electrons can occupy a single energy level in an atom according to the Pauli Exclusion Principle?  
a) 3      b) 4      c) 2      d) None of these
9. Pauli Exclusion Principle applies to which type of particles?  
a) Photons      b) Neutrons      c) Electrons      d) Protons
10. What is the shape of S-Orbital  
a) Dumbbell      b) Spherical      c) Oval      d) None of these
11. What is the valency of carbon  
a) 3      b) 2      c) 4      d) None of these
12. Which Functional group present in given structure  $\text{RCOOR}'$ .  
a) Phenol      b) Ester      c) Acid      d) None of these
13. Aliphatic -OH is known as .....

- a) Alcohol                      b) Ester                      c) Acid                      d) None of these

14. Mixing and recasting of atomic orbital is called as.....

- a) Hybridization                      b) organic reaction                      c) Acid & base                      d) None of these

15. Hydrocarbons are organic compounds with element \_\_\_\_\_

- a) Both hydrogen and carbon                      b) Carbon                      c) Hydrogen                      d) Oxygen

16. Which of the following is not a class of organic compounds?

- a) Amides compound                      b) Electro compounds                      c) Nitro compound                      d) Carbonyl

17. Ph of water is

- a) Basic                      b) Acidic                      c) Neutral                      d) None of these

18. Acid range of Ph is

- a) 7 to 14                      b) 1 to 7                      c) both a & b                      d) None of these

19. In periodic table f block contains ..... Element

- a) Lanthanides & Actinides                      b) Alkali                      c) Nobel Gas                      d) None of these

20. In stable organic compounds, carbon will always form..

- a) 2-Bond                      b) 4-Bond                      c) 6-Bond                      d) 3-Bond



**SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI**

**Year 2023-24, Winter**

**Shri. Dr. R.G. Rathod Arts & Science College Murtizapur, Dist.-Akola 444107**

**Department of Chemistry**

**Sub: Chemistry**

**Class: B.Sc. F Y Sem-I**





Shri. Dr. R.G. Rathod Arts & Science College Murtizapur, Dist.-Akola

**Department of Chemistry**

B.Sc—I Sem-I

(YEAR 2023-24) Winter

**Bridge Coerce Test Mark List**

Sr. No.	Name of the student	Marks
1	Abdul allamuddin zameeruddin	18
2	Abuhurera bin khalid chaouse	18
3	Aniket dnyaneshwar kolvale	18
4	Anisha satish raut	19
5	Ankush ratan pawar	19
6	Anushri rajendra jawarkar	19
7	Aqsa parveen mo harun	20
8	Aryan ujwal ingale	18
9	Ayush rajesh shinde	19
10	Bhairavi santosh bhingare	18
11	Bhumi bhavesh rai	19
12	Divya balu hajbe	20
13	Gayatri santosh raut	18
14	Kashaf anjum nasrullah khan	19
15	Manoj manohar wankhade	18
16	Mayur sanjay malve	17
17	Mayuri balkrushna patekar	18
18	Mayuri satish vaidya	19
19	Mushfique bin shafique chaus	18
20	Muskan khanam zakir khan	19
21	Neha tejrao jadhao	18
22	Niranjan golambe siddhi	18
23	Nitin gajananrav wankhade	18
24	Pallavi gajanan malode	
25	Pallavi umesh thombare	18



26	Pratiksha eknathrav rathod	18
27	Qais khan rafatullah khan	18
28	Sadiya mir shaukat ali	19
29	Sakshi sagar khade	19
30	Samiksha vinod umbarkar	19
31	Samrudhi anil vaidya	20
32	Sanika rajendra katyarmal	20
33	Sanika rameshwar khandekar	19
34	Sanika santosh wankhade	18
35	Sarathi jitendra rawalani	19
36	Sarvesh rajesh gawande	18
37	Seema ashok raut	19
38	Shruti babulal ingale	19
39	Shruti santosh tike	19
40	Suhani dineshkumar daryani	20
41	Tanvi subhash jadhao	18
42	Tanvi vijayrao deshmukh	18
43	Vaidavi surendra bhad	18

Name of Teacher

ME. K. D. Niede

Signature:.....

K. Niede

College  
Seal



Head of Department

Signature: .....

Sign of Principal  
Principal  
Shri. Dr. R. G. Rathod Arts & Science  
College, Murtizapur, Dist. Akola

**SHRI DR. R. G. RATHOD ARTS AND SCIENCE COLLEGE, MURTIZAPUR DIST - AKOLA**

Department of Chemistry

(YEAR 2023-24) Winter

NAME OF ACTIVITY : Bridge course Test.

Venue :

Date :

21-7-2023

Time: 11:52 to 12:40

**ATTENDANCE**

Sr. No.	Name of the student	Group	Signature
1	Samrudhi Anil Vaidya		<u>A.Vaidya</u>
2	Mayuri Satish Vaidya		<u>M.S.Vaidya</u>
3	Sanika Santosh Wankhade		<u>S.Wankhade</u>
4	Anisha Satish Raut		<u>A.Raut</u>
5	Divya Balu Hajbe		<u>D.Hajbe</u>
6	Tanvi Vijayrao Deshmukh		<u>T.Deshmukh</u>
7	Pratiksha Eknathrao Rathod		<u>P.Rathod</u>
8	Bhaisavi Santosh Bhingare		<u>B.S.Bhingare</u>
9	Mayuri Balkrushna Patilkar		<u>M.Patilkar</u>
10	Anushe Rajendra Jambekar		<u>A.Jambekar</u>
11	Sarthi Jitendra Rawlani		<u>S.Rawlani</u>
12	Vaidavi Sureshwar Bhad		<u>V.Bhad</u>
13	Sanika Rameshwar Khandekar		<u>S.Khandekar</u>
14	Shruti Babulal Ingle		<u>S.Ingle</u>
15	Sakshi sagar Khade		<u>S.Khade</u>
16	Seema Ashok Raut		<u>S.Raut</u>
17	Neha Tejrao Jadhao		<u>N.Jadhao</u>
18	Tanvi Subhash Jadhao		<u>T.Jadhao</u>
19	Gayatri Santosh Raut		<u>G.Raut</u>
20	Pallavi D. Thombare		<u>P.Thombare</u>
21	Sanika Rajendra katyarmal		<u>S.R.katyarmal</u>
22	Shruti Santosh Tike		<u>S.S.Tike</u>
23	Suhani D. Daryani	M3	<u>S.Daryani</u>
24	Samiksha V. Umbarkar	M2	<u>S.Umbarkar</u>



SHRI DR. R. G. RATHOD ARTS AND SCIENCE COLLEGE, MURTIZAPUR DIST - AKOLA

Department of Chemistry

(YEAR 2023-24) Winter

25	Muskan Jhanam Zahir Khan	B <sub>2</sub>	<del>Shukla</del>
26	Sadiya Mir shaukat Ali	B <sub>2</sub>	S. Sali
27	Aqsa Parveen Mohd. Hossun	B <sub>1</sub>	<del>q. q. q.</del>
28	Kashaf Anjum Nasrullah	B <sub>1</sub>	<del>Khan</del>
29	Bhuresh Bhavesh Rai	B <sub>1</sub>	<del>Bhuresh</del>
30	A		
31	Rais Khan Rafatullah Khan	B <sub>1</sub>	<del>Rais</del>
32	Abdul Alkaramuddin Zamiruddin	B <sub>1</sub>	<del>Abdulla</del>
33	Mushfiq Bin shafique chaus	B <sub>2</sub>	Mushfiq
34	Mohammad . Faisal Naimuddin	B <sub>1</sub>	<del>Faisal</del>
35	Ankush Ratan Pawar	M <sub>1</sub>	Pawar
36	Nitin Gajanan Wankhade	M <sub>1</sub>	<del>Wankhade</del>
37	Amyan Ujwal Ingle	M <sub>1</sub>	<del>Ingle</del>
38	Ayush Rajesh Shinde	M <sub>1</sub>	<del>Shinde</del>
39	Abuturra Bin Khalid chause	B <sub>1</sub>	Abuturra
40	Manoj Mandhais Wankhade	B <sub>1</sub>	<del>Wankhade</del>
41	Aniket Dnyaneshwar Kolawale	B <sub>1</sub>	<del>Aniket</del>
42	Mayur Sanjay malve		<del>Mayur</del>
43	Garish . Rajesh Gokande	B <sub>3</sub>	<del>Gokande</del>
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**SHRI DR. R. G. RATHOD ARTS AND SCIENCE COLLEGE, MURTIZAPUR DIST - AKOLA**

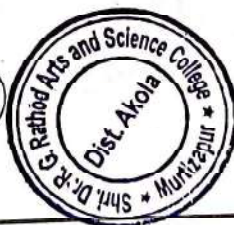
**Department of Chemistry**

**(YEAR 2023-24) Winter**

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M.E.K.D. Niede  
Name of Teacher

**Assistant Professor**  
Shri. Dr. R. G. Rathod Arts and Science  
College, Murtizapur, Dist. Akola



B.D.  
**Head of Department**  
**Head & Associate Professor**  
**Department of Chemistry**  
Shri. Dr. R. G. Rathod Arts and Science  
College, Murtizapur, Dist. Akola  
Signature: .....

P.P.  
**Principal**  
Shri. Dr. R. G. Rathod Arts & Science  
College, Murtizapur, Dist. Akola



# SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI

Year 2023-24, Winter

Shri.Dr.R.G. Rathod. Rathod ART'S & Science College Murtizapur Dist.-Akola

Department of Chemistry

Class: B.Sc. F Y Sem-I

Sub: Chemistry

## Bridge Course Attendance

Sr.no	Name of students						
1	AACHAL VILASRAO KOKANE	—	—	—	—	—	—
2	ABDUL ALLAMUDDIN ZAMEERUDDIN	Abdullah	Abdullah	Abdullah	Abdullah	Abdullah	Abdullah
3	ABUHURERA BIN KHALID CHAOUSE	Abuhurera	Abuhurera	Abuhurera	Abuhurera	Abuhurera	Abuhurera
4	AKANKSHA PRAMOD ANBHORE	—	—	—	—	—	—
5	ANIKET DNYANESHWAR KOLVALE	Aniket	Aniket	Aniket	Aniket	Aniket	Aniket
6	ANISHA SATISH RAUT	Asant	Asant	Asant	Asant	Asant	Asant
7	ANUSHRI RAJENDRA JAWARKAR	Anushri	Anushri	Anushri	Anushri	Anushri	Anushri
8	AQSA PARVEEN MO HARUN	Aqsa	Aqsa	Aqsa	Aqsa	Aqsa	Aqsa
9	AQSASADAF NAZAKATULLAH KHAN	—	—	—	—	—	—
10	ARYAN UJWAL INGLE	Aryang	Aryang	Aryang	Aryang	Aryang	Aryang
11	ASHWINI INWHELSINGH MUNGNE	—	—	—	—	—	—
12	AYUSH RAJESH SHINDE	Ayush	Ayush	Ayush	Ayush	Ayush	Ayush
13	BHAIRAVI SANTOSH BHINGARE	—	—	—	—	—	—
14	BHUMI BHAVESH RAI	Bhumi	Bhumi	Bhumi	Bhumi	Bhumi	Bhumi
15	DISHA PRAKASH INGOLE	—	—	—	—	—	—
16	DIVYA BALU HAJBE	Divya	Divya	Divya	Divya	Divya	Divya
17	DIVYA EKANATH MOGARE	—	—	—	—	—	—
18	DIVYANI JANARDHAN NAKAT	—	—	—	—	—	—
19	DNYANESHWARI GAJANAN RAUT	—	—	—	—	—	—
20	FAISAL NAEEMUDDIN MOHAMMAD	Faisal	Faisal	Faisal	Faisal	Faisal	Faisal
21	GAURI SUNIL CHAUDHARI	—	—	—	—	—	—
22	GAYATRI SANTOSH RAUT	Gaut	Gaut	Gaut	Gaut	Gaut	Gaut
23	GAYATRI SHRIKRUSHNA NEMADE	—	—	—	—	—	—
24	KASHAF ANJUM NASRULLAH KHAN	Kashaf	Kashaf	Kashaf	Kashaf	Kashaf	Kashaf
25	KHUSHI SHEKHAR DUBEY	—	—	—	—	—	—
26	KUSHI RAJU PANDIT	—	—	—	—	—	—
27	MANISHA MURLIDHAR VYAS	Manish	Manish	Manish	Manish	Manish	Manish
28	MANOJ MANOHAR WANKHADE	Manoj	Manoj	Manoj	Manoj	Manoj	Manoj
29	MAYUR SANJAY MALVE	Mayur	Mayur	Mayur	Mayur	Mayur	Mayur
30	MAYURI BALKRUSHNA PATEKAR	Patkar	Patkar	Patkar	Patkar	Patkar	Patkar
31	MAYURI SATISH VAIDYA	M.S.Vaidya	M.S.Vaidya	M.S.Vaidya	M.S.Vaidya	M.S.Vaidya	M.S.Vaidya
32	MUSHFIQUE BIN SHAFIQUE CHAUS	Mushfique	Mushfique	Mushfique	Mushfique	Mushfique	Mushfique
33	MUSKAN KHANAM ZAKIR KHAN	Muskan	Muskan	Muskan	Muskan	Muskan	Muskan
34	NAINA GAJANAN RASEKAR	—	—	—	—	—	—



35	NAINA RAJESH ASWANI				<u>NAR</u>	<u>NAR</u>	<u>NAR</u>
36	NAMRATA JAGDISH PANDIT						
37	NEHA TEJRAO JADHAO				<u>Nethao</u>	<u>Nethao</u>	
38	NIRANJAN GOLAMBE SIDDHI	<u>Golambe</u>	<u>Golambe</u>	<u>Golambe</u>			
39	NITIN GAJANANRAV WANKHADE	<u>Wankhade</u>	<u>Wankhade</u>	<u>Wankhade</u>	<u>Wankhade</u>		
40	PALLAVI GAJANAN MALODE						
41	PALLAVI UMESH THOMBARE	<u>Thombare</u>	<u>Thombare</u>	<u>Thombare</u>	<u>Thombare</u>	<u>Thombare</u>	
42	PANKAJ EKNATH MOGRE						
43	PANKAJ SUDHAKAR KOWE						
44	PAVAN RAJENDRA CHAVHAN						
45	PAYAL SHASHIKANT ATOTE						<u>Atote</u>
46	PAYAL SUBHASH GAJBHIYE	<u>Payal</u>	<u>Gajbhiye</u>	<u>Gajbhiye</u>			
47	POOJA SANJAY WALEKAR						
48	PRACHI RAJESH GHATE	<u>Ghate</u>	<u>Ghate</u>	<u>Ghate</u>			
49	PRADNESH SANTOSH KAWARE	<u>Kaware</u>	<u>Kaware</u>	<u>Kaware</u>			
50	PRANJALI HARIDAS HERODE						
51	PRATHMESH NIRANJAN GAWAI						
52	PRATIKSHA EKNATHRAV RATHOD						
53	PRITI BABARAO TELMORE						
54	QAIS KHAN RAFATULLAH KHAN	<u>Qais</u>	<u>Qais</u>	<u>Qais</u>	<u>Qais</u>	<u>Qais</u>	<u>Qais</u>
55	REVATI LAXMAN DESHMUKH	<u>Deshmukh</u>	<u>Deshmukh</u>	<u>Deshmukh</u>			
56	ROHINI RAMRAO WANKHADE					<u>Wankhade</u>	<u>Wankhade</u>
57	ROHIT PRAMOD DAHAKE						
58	RUSHALI ANIL KALE						
59	SADIYA MIR SHAUKAT ALI	<u>S.sali</u>	<u>S.sali</u>	<u>S.sali</u>	<u>S.sali</u>	<u>S.sali</u>	<u>S.sali</u>
60	SAKSHI SAGAR KHADE						
61	SAMIKSHA ARVIND GAWANDE	<u>S.A. Gawande</u>	<u>S.A. Gawande</u>	<u>S.A. Gawande</u>			
62	SAMIKSHA BALKRUSHNA MEHARE					<u>S.B. Mehare</u>	<u>S.B. Mehare</u>
63	SAMIKSHA VINOD UMBARKAR	<u>Umbarkar</u>	<u>Umbarkar</u>	<u>Umbarkar</u>	<u>Umbarkar</u>	<u>Umbarkar</u>	<u>Umbarkar</u>
64	SAMRUDDHI CHANDU KHANDEKAR	<u>Khandekar</u>	<u>Khandekar</u>	<u>Khandekar</u>			
65	SAMRUDHI ANIL VAIDYA	<u>Vaidya</u>	<u>Vaidya</u>	<u>Vaidya</u>			
66	SANIKA RAJENDRA KATYARMAL						
67	SANIKA RAMESHWAR KHANDEKAR						
68	SANIKA SANTOSH WANKHADE						
69	SANIKA SARANGDHAR CHOPADE						
70	SANIYA SHAHISTA PATEL	<u>Opate</u>	<u>Opate</u>	<u>Opate</u>	<u>Opate</u>	<u>Opate</u>	<u>Opate</u>
71	SANJANA MADHAV WAGH						<u>Wagh</u>
72	SARTHAK SANJAY INGOLE						
73	SARTHI JITENDRA RAWALANI				<u>Rawani</u>	<u>Rawani</u>	
74	SARVESH RAJESH GAWANDE	<u>Gawande</u>	<u>Gawande</u>	<u>Gawande</u>	<u>Gawande</u>	<u>Gawande</u>	<u>Gawande</u>
75	SEEMA ASHOK RAUT	<u>Raut</u>	<u>Raut</u>	<u>Raut</u>	<u>Raut</u>	<u>Raut</u>	<u>Raut</u>
76	SHABNAM SAHER AYUB KHAN PATHAN	<u>Pathan</u>	<u>Pathan</u>	<u>Pathan</u>	<u>Pathan</u>	<u>Pathan</u>	<u>Pathan</u>



77	SHAILESH SUNIL PAWAR						
78	SHIFATARANNUM MAHEBOOB SHEIKH						
79	SHRADDHA NAJUKRAO GHUMSE						
80	SHRUTI BABULAL INGLE					<u>Sruti</u>	
81	SHRUTI DINESH MISHRA						
82	SHRUTI SANTOSH TIKE				S.S.Tike	S.S.Tike	S.S.Tike
83	SHWETA SANJAY BOLE						
84	SUHANI DINESHKUMAR DARYANI				<u>Suhani</u>	<u>Suhani</u>	<u>Suhani</u>
85	SUMAIYA ANIL AUNDHKAR	<u>MS</u>	<u>MS</u>	<u>AA</u>	<u>Sadha</u>		<u>Sadha</u>
86	TANVI SUBHASH JADHAO						
87	TANVI VIJAYRAO DESHMUKH	<u>Beshmukh</u>	<u>Beshmukh</u>	<u>Beshmukh</u>	<u>Beshmukh</u>	<u>Beshmukh</u>	<u>Beshmukh</u>
88	TEJAS NIRANJAN PACHADE						
89	TEJASWINI MANOJ DESHMUKH	<u>T.Deshmukh</u>	<u>T.Deshmukh</u>	<u>T.Deshmukh</u>	<u>T.Deshmukh</u>	<u>Deshmukh</u>	<u>Deshmukh</u>
90	TUSHARI GAJANAN RAUT						
91	VAIDAVI SURENDRA BHAD						
92	VAIDHAVI KAVISHVAR DHAKULKAR	<u>V.K.Dhake</u>	<u>V.K.Dhake</u>	<u>V.K.Dhake</u>	<u>V.K.Dhake</u>	<u>V.K.Dhake</u>	<u>V.K.Dhake</u>
93	VAISHNAVI GHANSHYAM SURJUSE						
94	VAISHNAVI MAROTI UDAKHE						
95	VIDHI RAJESH DESHMUKH					<u>OK</u>	
96	YASH RAJENDRA KHOKALE						
97	Arkush Ratan Pawar	<u>Pawar</u>	<u>Pawar</u>	<u>Pawar</u>			
98							
99	<u>date -</u>						
100							

15-7-23 16-7-23 17-7-23 18-7-23 19-7-23 20-7-23



To,

The Principal

Shri. Dr. R. G. Rathod Arts and Science College  
Murtizapur Dist. Akola

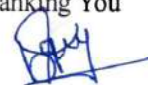
**Subject: - Regarding permission to conduct Certificate Course On "Chemical Handling and Laboratory Safety"**

Respected Sir,

The department of chemistry is going to organise two-week **Certificate Course On "Chemical Handling and Laboratory Safety"** on dated 20/10/2023 to 04/11/2023. All UG and PG students will participate in this certificate course. The mode of lecture is online. I request you to please grant the permission.

Date: 13/10/2023

Thanking You

  
Mr. V. R. Shrikhande  
Coordinator

*Permitted*  
*(H. R. G.)*



**Shri. Dr. R. G. Rathod Arts and Science College Murtizapur Dist. Akola**


**Department of Chemistry**

**Session: 2022-23**

**Notice**

All the UG and PG students of Chemistry are hereby informed that our department organised two-week **Certificate Course On "Chemical Handling and Laboratory Safety"** on dated 20/10/2023 to 04/11/2023. The mode of lecture is online via Google Meet. All students must attend the certificate course. All participated students got certificate.

Date: 13/10/2023



Coordinator



**H.O.D.**  
**Head & Associate Professor**  
**Department Of Chemistry**  
**Shri. Dr. R. G. Rathod Arts & Science**  
**College, Murtizapur, Dist. Akola**



**Principal**  
**Shri. Dr. R. G. Rathod Arts & Science**  
**College, Murtizapur, Dist. Akola**

**Shri. Dr. R. G. Rathod Arts and Science College Murtizapur Dist. Akola**

**Department of Chemistry**

**Session: 2023-24**

**Brief Report on**

**Certificate Course On "Chemical Handling and Laboratory Safety"**

<b>Name of Department:</b>	Chemistry
<b>Date &amp; Time:</b>	20/10/2023 to 04/11/2023 12.00-2.00 pm
<b>Venue:</b>	Department of Chemistry

**Objective of the Event:**

- To impart the required knowledge of various most commonly used chemicals and apparatus.
- To impart necessary skills to handle hazardous chemicals.
- Theoretical knowledge of instruments used in laboratory.
- Practical knowledge of instruments used in laboratory.
- To operate and to maintain the laboratory equipment's.
- Instrumentation, Calibration and their practical applications.
- How to handle the emergency while working in laboratory.

**Brief information about the event:**


Department of Chemistry has arranged two-week **Certificate Course On "Chemical Handling and Laboratory Safety"** on dated **20 October 2023 to 04 November 2023**. We got a good response of students from different college. The course covered basic chemistry laboratory techniques like physical instruments, glassware in the laboratory, Mathematical calculations in analysis, Quality control management in laboratory, Principles of volumetric, gravimetric analysis, Safety and precautions in laboratory, during instruction, students showed interest in knowing about MSDS, safety measure in lab. Finally, the course succeeds in making students industry ready. On behalf of the organizing committee, we congratulate to all the students who actively participated in the certificate course and certificate will be issue to all participants.



Coordinator  
Mr. V. R. Shrikhande



H.O.D.  
Head & Associate Professor  
Department Of Chemistry  
Shri. Dr. R. G. Rathod Arts & Science  
College, Murtizapur, Dist. Akola



Principal  
Shri. Dr. R. G. Rathod Arts & Science  
College, Murtizapur, Dist. Akola



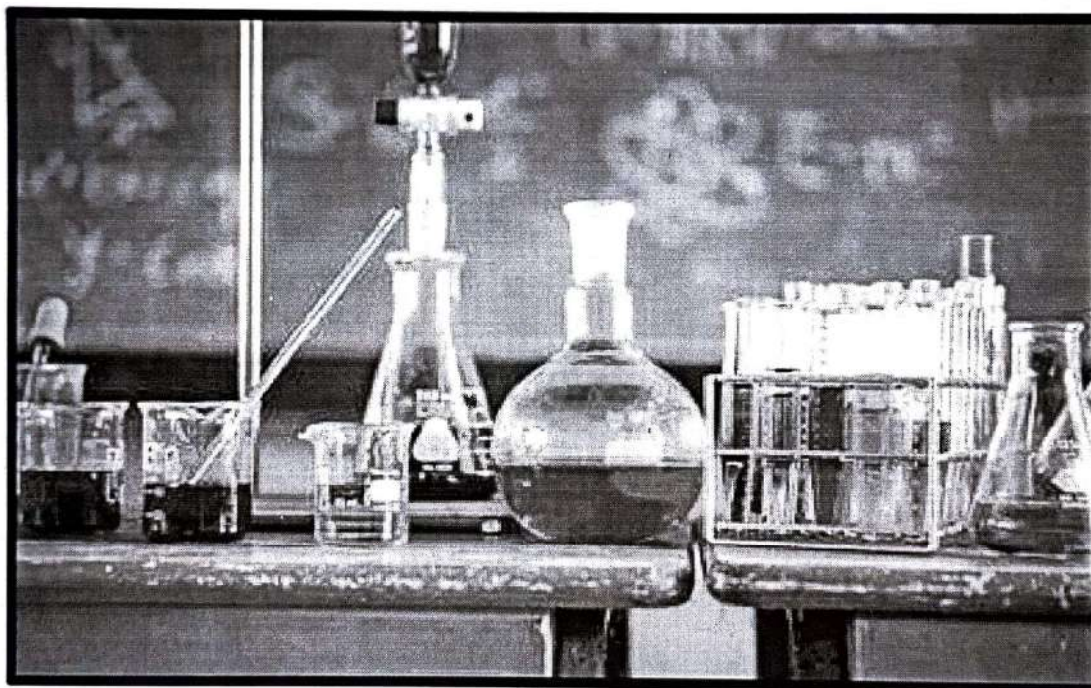
**Shri. Dr. R. G. Rathod Arts and Science College Murtizapur**

**Dist. Akola**

**CERTIFICATE COURSE ON "CHEMICAL HANDLING AND  
LABORATORY SAFTY"**

**FOR UG STUDENTS OF CHEMISTRY**

**Duration:** 20 October – 04 November 2023



**Registration Fee:** Nil

**Last date for applying:** 19 October 2023

**Organizer**

Department of Chemistry

Shri. Dr. R. G. Rathod Arts and Science College

Murtizapur Dist. Akola

Maharashtra 444701

E-mail: [artssciencecollege@rediffmail.com](mailto:artssciencecollege@rediffmail.com)

Website: <https://rgrcollmzr.ac.in/>



## **About Society**

Shri. Govindsing Rathod Shikshan Prasarak Mandal, Dahatonda, is the leading multipurpose educational society of the Murtizapur Taluka of Akola District (Maharashtra). This society institution was registered as a public charitable trust (R. No. MH-234 Akola) in 1969. Late Shri. Dr. Ramsing Govindsing Rathod, a well-known persona and renowned general physician from Murtizapur Taluka, was the founder president. Under the aegis of this society, currently, different nine educational units are running, including primary schools, secondary schools, higher secondary schools, residential high schools, boys and girls hostels, a junior college, and a degree college. Since its inception, our parent education society has served the community and worked tirelessly for the upliftment of backward students in this area.

## **About the Institution**

Shri. Dr. R. G. Rathod Arts & Science College, Murtizapur, Dist. Akola was established in 2001 by Shri Govindsing Rathod Shikshan Prasarak Mandal, Dahatonda, under the able guidance of a great idealistic personality, Late. Dr. Ramsing Govindsing Rathod, then a well-known Doctor of Murtizapur city and founder president of the parent society. Considering, the then scenario of education in the area, our college was established with Arts (humanities) and science (science and technology) faculties. In 2010, the government of Maharashtra gave full grants to all UG courses under the faculty of science and technology, while the subjects under the humanities faculty are all self-financed. Currently, the college is providing education at the undergraduate level in 11 subjects from the humanities faculty and six subjects from the Science and Technology faculty, along with postgraduate programmes in three subjects (Zoology, Chemistry, and Mathematics) and Ph.D. programmes in six subjects (Zoology, Botany, Chemistry, Physics, Mathematics, and Library and Information Science). The college has experienced and enthusiastic staff; in total, 27 qualified full-time teaching faculty members are working in the college, of which 10 are recognised as Ph.D. supervisors. The college has a beautiful, eco-friendly campus. The college has all the basic infrastructural facilities, including laboratories and ICT facilities. It has a well-developed computer centre and central library with a spacious reading room for students. The college also has a well-developed botanical garden with significant medicinal and ornamental plants. A huge playground and facilities for various outdoor and indoor games and sports are another uniqueness of the college. Since its establishment, the advancement of our college has been endlessly growing and serving the community. Since its beginning, the college has been committed to quality education. In its 1<sup>st</sup> NAAC assessment in 2014-15, the college scored a "B" grade with a CGPA of 2.63 and is marching ahead under the leadership of our President, Hon. Smt. Damyantitai Rathod, Secretary, Hon. Dr. Anil R. Rathod, and Principal, Dr. A. P. Charjan.

## **Vision**

To, provide quality and value-based education to all student especially from backward classes and downtrodden girls and enhance their individual potential which could be utilized for better nation building.



## **Mission**

- To offer excellent and invaluable service in the field of education to the poor and the backward class students of the society.
- To aim at the overall personality development of the students through extra and co-curricular activities, in tandem with various social and cultural organization.
- To Provide a platform to the students by giving them an opportunity to face all the challenges of a competitive world, with the utmost utilization of their potential in sports, athletics and other events.
- To undertake quality-related research studies, consultancy and Training programmes.

## **Specific objectives of the CHLS 2023-24**

- To impart the required knowledge of various most commonly used chemicals and apparatus.
- To impart necessary skills to handle hazardous chemicals.
- Theoretical knowledge of instruments used in laboratory.
- Practical knowledge of instruments used in laboratory.
- To operate and to maintain the laboratory equipment's.
- Instrumentation, Calibration and their practical applications.
- How to handle the emergency while working in laboratory.

## **Expected outcome of CHLS 2023-24**

- Familiar with the handling laboratory apparatus.
- Understand the nature and handling of chemicals.
- Familiar to various solvents used in laboratory and industry
- Precaution to be taken during handling of hazardous chemicals.
- How to carry out the organic synthesis.
- Confidence to handle instruments such as- pH meter, potentiometer, colorimeter, spectrophotometer etc.

## Topic

Sr. No.	Topic	Name of the Speaker
1	Introduction to laboratory safety	Mr. V. R. Shrikhande
2	Introduction & Handling of glassware & Electronic Balance	Mr. K. D. Nirde
3	Solution preparation & Precaution to be taken while performing titrations	Mr. V. K. Panpalia
4	Buffer Solution – Preparation & its Significance	Dr. D. B. Dupare
5	Indicators – Types, Role & Mode of Action	Mr. A. K. Raut
6	Organic Compounds – Methods of Purification & Identification of General Physical Properties	Dr. M. Mujahid
7	Melting Point & Boiling Point – Determination & Their Significance.	Dr. S. V. Deshmukh
8	Acid and Bases – Introduction, Handling & Corrosive Properties.	Dr. S. S. Mundhada
9	Introduction & Handling of toxic metals used in laboratory	Mr. A. K. Raut
10	Solvents – Introduction Types & Handling	Mr. R. D. Ghodile
11	Handling of bromine in laboratory	Dr. A. K. Wanjari
12	Handling of phenol and its derivatives in laboratory	Dr. A. S. Nipte
13	Handling of benzene and its derivatives	Mr. N. G. Jadhav
14	Precaution to be taken during organic synthesis & use of Microscale Technique	Dr. M. Mujahid
15	Handling of gaseous evolution during synthesis	Mr. K. D. Nirde
16	Introduction to Electrodes & Salt Bridge	Mr. A. R. Thakare
17	Handling and calibration of various instruments	Dr. A. S. Dive
18	Solvent Extraction & Separation Techniques	Mr. R. P. Rahate
19	Introduction and Preliminary Tests for Identification of Functional groups	Dr. P. S. Chaudhari



### **Who can apply:**

- UG (B. Sc. I) students offering chemistry Subject are eligible to apply for this workshop.

### **Guidelines:**

1. No registration fees
2. Last date for Registration: 19 October, 2023
3. Platform: ZOOM / Google Classroom
4. Meeting link will be shared only to the selected participants
5. E- Certificate will be provided to all the registered participants who attend all the sessions.
6. Registration through Google form.

**Link for Registration:** <https://forms.gle/s7LBLbfGUKV7MgFF9>

**Link to join WhatsApp Group:**

<https://chat.whatsapp.com/Gv5VdlO7Yj0FoMwdjWYpH6>

## ORGANIZING COMMITTEE

**Dr. A. P. Charjan**  
**Principal**


**Convenor**  
**Mr. V. R. Shrikhande**  
**Asst. Prof.**

**Organizing Secretary**  
**Mr. K. D. Nirde**  
**Asst. Prof.**

**Further Assistance: Please Contact**

**Mr. V. R. Shrikhande**  
**Mobile No. 9545657803**  
**E-mail: vaibhav.7788@rediffmail.com**

  
**Head & Associate Professor**  
**Department Of Chemistry**  
**Shri. Dr. R. G. Rathod Arts & Science**  
**College, Murtizapur, Dist. Akola**

  
**Principal**  
**Shri. Dr. R. G. Rathod Arts & Science**  
**College, Murtizapur, Dist. Akola**




**Shri. Dr. R. G. Rathod Arts and Science College Murtizapur**

**Dist. Akola**

**CERTIFICATE COURSE ON "CHEMICAL HANDLING AND  
LABORATORY SAFTY"**

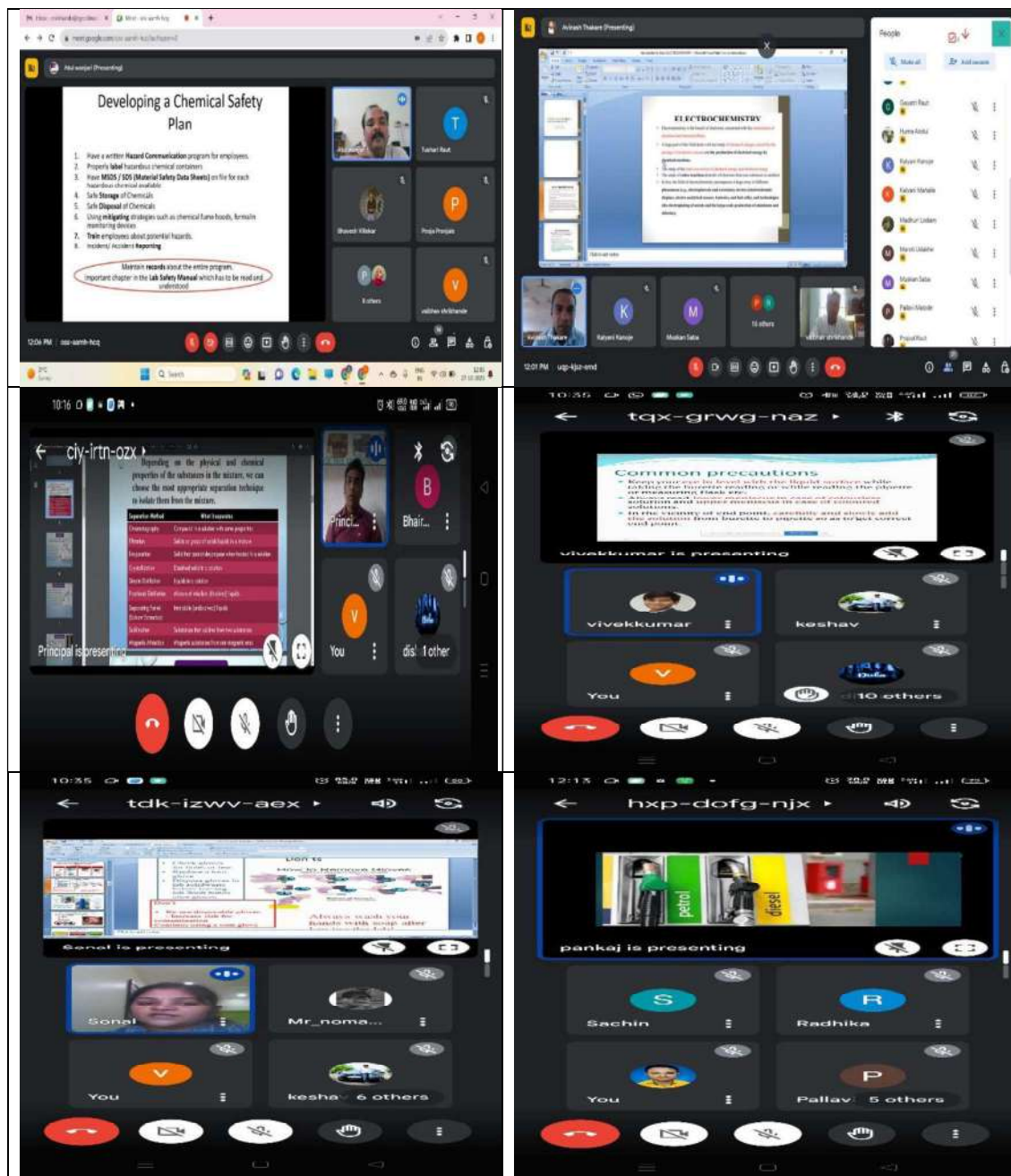
Sr. No.	Topic	Name of the Speaker	Date	Time
1	Introduction to laboratory safety	Mr. V. R. Shrikhande	20/10/2023	12.00 to 1.00 pm
2	Handling of benzene and its derivatives	Mr. N. G. Jadhav	20/10/2023	1.00 to 2.00 pm
3	Solution preparation & Precaution to be taken while performing titrations	Mr. V. K. Panpalia	21/10/2023	12.00 to 1.00 pm
4	Acid and Bases – Introduction, Handling & Corrosive Properties.	Dr. S. S. Mundhada	23/10/2023	12.00 to 1.00 pm
5	Solvent Extraction & Separation Techniques	Mr. R. P. Rahate	25/10/2023	12.00 to 1.00 pm
6	Introduction and Preliminary Tests for Identification of Functional groups	Dr. P. S. Chaudhari	26/10/2023	12.00 to 1.00 pm
7	Handling of bromine in laboratory	Dr. A. K. Wanjari	27/10/2023	12.00 to 1.00 pm
8	Introduction to Electrodes & Salt Bridge	Mr. A. R. Thakare	28/10/2023	12.00 to 1.00 pm
9	Solvents – Introduction Types & Handling	Mr. R. D. Ghodile	29/10/2023	12.00 to 1.00 pm
10	Handling and calibration of various instruments	D Dr. A. S. Dive	30/10/2023	12.00 to 1.00 pm
11	Handling of phenol and its derivatives in laboratory	Dr. A. S. Nipte	31/10/2023	12.00 to 1.00 pm
12	Handling of gaseous evolution during synthesis	Mr. K. D. Nirde	01/11/2023	12.00 to 1.00 pm
13	Buffer Solution – Preparation & its Significance	Dr. D. B. Dupare	01/11/2023	1.00 to 2.00 pm
14	Indicators – Types, Role & Mode of Action	Mr. A. K. Raut	02/11/2023	12.00 to 1.00 pm
15	Organic Compounds – Methods of Purification & Identification of General Physical Properties	Dr. M. Mujahid	02/11/2023	1.00 to 2.00 pm
16	Melting Point & Boiling Point – Determination & Their Significance.	Dr. S. V. Deshmukh	03/11/2023	12.00 to 1.00 pm
17	Introduction & Handling of glassware & Electronic Balance	Mr. K. D. Nirde	03/11/2023	1.00 to 2.00 pm
18	Introduction & Handling of toxic metals used in laboratory	Mr. A. K. Raut	04/11/2023	12.00 to 1.00 pm
19	Precaution to taken during organic synthesis & use of Microscale Technique	Dr. M. Mujahid	04/11/2023	1.00 to 2.00 pm

  
Head & Associate Professor  
Department Of Chemistry  
Shri. Dr. R. G. Rathod Arts & Science  
College, Murtizapur, Dist. Akola

  
Principal  
Shri. Dr. R. G. Rathod Arts & Science  
College, Murtizapur, Dist. Akola

# Certificate Course On “Chemical Handling and Laboratory Safety”

## Photographs



Principal  
Shri. Dr. R. G. Rathod Arts & Science  
College, Murtizapur, Dist. Akola