

Title of Skill Course: Basic chemical lab technician

1. Department: Department of Chemistry
2. Title: Basic chemical lab technician
3. Sector: Chemical
4. Year of implementation: 2022

Course Structure

| Skill Level | Theory Hours | Practical Hours | Total Hours | Credits | No. of students in batch |
|-------------|--------------|-----------------|-------------|---------|--------------------------|
| 4 | 10 | 05 | 15 | 01 | 30 |

Syllabus

Course Objectives: Students will be able to

1. Learn role and responsibility which are required for the professional job.
2. Understand the importance of technical knowledge.

Theory Syllabus (Contact Hrs: 15, Credits: 01)**Unit I: Role and Responsibilities** [5]

Design and execute laboratory testing, Conduct experiments, Organize and store all chemical substances, Record and manage all data, Manage lab equipment and supplies, Manage cleanliness, orderliness and supplies, Prepare reports based on findings, Observe and interpret research findings, Receive, label and analyze samples.

Unit II: Technical Knowledge [5]

Lab skills include creating a hypothesis, record keeping, pipetting, measuring, lab safety, calibration of lab equipments and instruments.

Course Outcomes: After completion of this course, students will be able to

1. Perform laboratory activity in a scientific manner.
2. Calibrate and demonstrate the working of instruments.

Reference Books:

1. Jack T. Ballinger and Gershon J. Shugar, Chemical Technicians' Ready Reference Handbook, 5th Edition (The McGraw-Hill Companies, Inc., 2011)
2. Charlotte Bailey, Vicki Barwick, Laboratory Skills Training Handbook (ISBN 978-0-948926-25-9, LGC Limited, May 2007)

Practicals: [5]

1. Preparation of safety data sheets for hazardous chemicals.

2. Handling of hazardous chemicals. (H_2SO_4 , HCl, HNO_3) etc
3. Storage of chemicals at workplace.
4. Use of fire extinguisher.
5. Preparation of laboratory reports.

BOS Sub Committee:

| Sr. No. | Name of Member | Designation | Address |
|---------|---------------------|-------------------|---|
| 1 | Mr. A. D. Kadam | Chairman | Assistant Professor, Y. C. I. S., Satara |
| 2 | Miss. P. S. Gaikwad | Member | Assistant Professor, Y. C. I. S., Satara |
| 3 | Mr. D. Rupanwar | Academic Expert | <i>Asst. Prof., LBS, Satara</i> |
| 4 | Mr. Ajit Ekal | Industrial Expert | Manager, Insta vision laboratories & services, Satara |