

GUJARAT  
TECHNOLOGICAL  
UNIVERSITY

BRIDGE COURSE CHEMISTRY

**Bridge Course-(Chemistry)**  
**B.E Semester 1**  
**Duration: 6 Weeks (4 Hrs/Week)**

**Course Objectives:**

- Identification of chemical compounds and radicals.
- To handle various lab instruments.
- To prepare solution of desired concentration.
- To co-relate fundamentals/basics in real world.
- Identify various glass-wares.
- Adjustment in college atmosphere and able to work in team.

**Course Outcomes:**

At the end of course, Students will able to

- Use various lab equipments and glass-wares.
- Work in team and adjust in new atmosphere
- Understand industrial applications of various compounds
- Learn basics of analytical chemistry

**Course Organization:-**

**List of Activities:**

Sr. No.	Title of Activity
1	Preparation of standard solution and its standardization.
2	Acid- Base titration(Neutralization titration)
3	Measurement of pH by pH-meter.
4	Measurement of hardness of water by EDTA method. (complexometric titration)
5	Preparation of phenol-formaldehyde resin.
6	Crystallization/ sublimation methods for purification.
7	Paper/ Column Chromatography method.
8	Introduction to analytical instruments (IR-Spectrometer, UV-Spectrophotometer etc.)
9.	Identification of acid/basic radicals
10	Small set up of system design

**Evaluation Pattern-**

- Weekly group discussion, poster preparation, Quiz etc.
- MCQ test at the end of the course (50 marks, 1 Hrs duration)

**Reference Books:-**

- How things works by Louis A Bloomfeild, Wiley Publications
- Chemistry by Raymond & Chang (Tata Macgrow Hill Pub.)
- Vogels analytical chemistry (Organic and Inorganic )