

**D. B. F. Dayanand College of Arts and Science**

**Department of Chemistry**

**Career Oriented Course (2018-19)**

**Handling of Analytical Instruments**

**Syllabus**

**(Total Periods: 45 Hrs)**

**Unit I: Introduction to analytical instruments (15 Hrs)**

- General Principles and working of analytical instruments
- Conductometer, potentiometer, pHmeter
- Construction and working of Cells/electrodes, salt bridge

**Unit II: Safety techniques of handling of analytical instruments (15 Hrs)**

- General Precautions for Working with Electrical Equipment
- Personal Safety Techniques
- Periodic Calibration

**Unit III: Applications of analytical instruments (15 Hrs)**

- Industrial applications
- Analytical applications
- Biomedical applications

## Practical

1. Construction of KCl / KNO<sub>3</sub> salt bridge
2. Acid-base titration using conductometry
3. Acid-base titration using potentiometry
4. Acid-base titration using pHmetry