Code	Subject Title	Cr. Hrs	Semester
CHEM-314	Physical Chemistry Lab	2	VI
Year	Discipline		
3	Chemistry-I, II		

SYLLABUS OUTLINE:

1. **Refractometery:**

To determine the unknown concentration of sucrose solution and ethanol solution.

2. **Molar mass determination (Colligative properties):**

To determine the molecular weight of a substance by cryoscopic method and Ebullioscopic method.

3. **Spectrophotometery:**

To determine the wavelength of maximum absorption of compounds using spectrophotometer.
To determine the unknown concentration of a compound using spectrophotometer.

4. **Phase Equilibrium:**

To determine the phase diagram of Naphthalene and diphenyl system.
To determine the phase diagram of urea and phenol.
To determine the phase diagram of Benzoic acid and Naphthalene.

5. **Optical activity measurement:**

To determine the unknown percentage composition of the following by using polarimeter (Sucrose, glucose).
To determine the specific and molar rotation of optically active compound (sucrose, glucose).

RECOMMENDED BOOKS:

1. Advanced Experimental Physical Chemistry by Ayodhya Sing.
2. Experimental Physical Chemistry by Daniel
3. Experimental Physical Chemistry by G.Peter Mattews.
4. Experiments in Physical Chemistry by Shoemaker.