**COURSE DETAILS**

**Analytical Biochemistry-II(Course code BioC-411)    (Credits 3+1)**

**Objectives** this course is expected to provide basic information regarding chromatographic and potentiometric analysis and its applications in biochemical research

**Course content**

**1. Chromatography**; Introduction, Principle, detection and application of Paper and thin layer chromatography, Gas chromatography and HPLC.

**2. Electrophoresis**; Introduction, Principles, theory, application.

**3. Potentiometery**; Introduction, Electrode system, Hydrogen electrode, Glass electrode, calomel electrode, potentiometric titration.

**4. Conductiometery**; Instrumentation Wheatstone bridge, Conductmetric Titration.

**5. Radiochemical methods**; Introduction, Nature of radioactivity, detection and measurement of radioactivity, Biochemical uses of radioactivity.

**Practicals**

**1.** Estimation of creation, Uric acid, and proteins in Urine.

**2.** Estimation of caffeine in soft drinks using spectrometric and HPLC method.

**3.** Thin layer chromatography for photosynthetic pigments

**4.** Analysis of common food sugars by HPLC.

**Resource Material**

1.                  Instrumental methods of chemical analysis by G. W. Ewing. McGraw-Hill Book Co. N.W. USA.

2.                  Biochemical spectroscopy by R. A. Morton, vol: I & II AdmaHilger, London.

3.                  Separation methods in biochemistry by C. J. O.R Morris and P. Morris. Pitman London, U.K.

4.                  Instrumental A Methods of Analysis by H.H. Willard, LL. Merritt and J,A. Dean, Van No strand, N.W. USA.

5.                  Isotopes and radiation in biology by C.C. Thorn burn, Butterworth, London.

6.                  Automatic Chemical analysis by H.H. Willard, LL. Merritt and J.A. Dean, Van No Strand, New York, U.S.A.

7.                  Hand Book of experimental immunology by D.M. weir, vol. I Black well.

8.                  Lipid analysis by W. C Christie, Fergamon Press, Oxford UK.

9.                  Analytical Biochemistry by David J, Holme and Hazel Peck Longman, London and New York.