



College of Pharmaceutical
Sciences and Drug Manufacturing
A college accredited by "NAQAAE"



PA 303

COURSE DESCRIPTION:-

The course includes introduction to types of analytical techniques. Volumetric analysis: Reactions suitable for titrimetric analysis; types & requirements. Titration methods Standard solutions and methods of expressing concentration. Acid-Base titration in Aqueous medium: General concept and theories for the nature of acids and bases, Hydrogen Ion Exponent & the pH scale & calculation of pH of different systems, Buffer solutions, Acid-Base indicators Acid-Base titration curves & their derivatization. Application of acid-base titration in aqueous medium with emphases on its use in drug analysis a continuation for quantitative volumetric analysis and its application on pharmaceutical products, it includes: Acid-Base titration in Non-aqueous Media, Theoretical basis, Types of non-aqueous solvents, their properties and role that affect the acids and bases, Titration of weak acid & base, Standard used and Indicators to detect end points. Application of Acid-Base titration in non-aqueous media and its use in drug analysis and water analysis. Precipitation titrations: Theoretical basis, Solubility products constant, Solubility of precipitates and factors affecting it Titration curves of precipitate formation, Argentometric methods cyanometric methods, other precipitation methods. Application with emphasis on analysis of pharmaceutical compounds and water analysis.

Complex formation titrations: Theoretical basis, Types of complexes, Chelates and their stability, Stability constant, Metallochromic indicators, EDTA complexes and types of EDTA titrations application with emphasis on analysis of pharmaceutical compounds and water analysis.