



**ST ALOYSIUS COLLEGE  
(AUTONOMOUS)  
MANGALORE 575 003**

DEPARTMENT OF  
**CHEMISTRY**

Offers

**Online Certificate Courses**  
in

- 1. Instrumental Methods & Separation Techniques in Chemical Analysis**
- 2. Forensic Chemistry – Scientific Approach to Crime Investigations**
- 3. Online Tools In Chemical Research**
- 4. Application of Analytical Chemistry in Food Laboratories**
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OR



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# 1. Instrumental Methods and Separation Techniques in Chemical Analysis

**Course Coordinators:** Dr Rachael Natash Mary, Ms Crystal Menezes

**Objectives:** This is a 30-hour programme in **blended mode** (both online and offline classes), concerned with theory and practices of instrumental and separation techniques for the analysis of chemical substances. It aims at developing knowledge and skills related to instrumental analysis. At the end of the course the participants will have a broad understanding of the principles, applications, and limitations of the instrumental and separation techniques.

**Highlights:** The course consists of 10 hours of online theory classes and 15 hours of offline practical / demo sessions at the Dept of Chemistry, St Aloysius College, Mangalore.

**Eligibility:** All B.Sc. / M.Sc. students who have studied chemistry at PUC level.

**Contents:** Introduction to instrumental methods of analysis and separation techniques. Study of principle, method of determination (demonstration) and applications of instruments namely Conductometer, Potentiometer, pH meter, Nephelometer, Colorimeter, Flame photometer and UV Spectrometer. Principle and separation of substances using Column, Thin Layer, Paper and High-Performance Liquid Chromatography.

**Learning outcomes:** After successful completion of this course the candidate will be able to know the principle and applications of instrumental and separation techniques.

**Timings:** 5.00 to 6.30 pm (Once a week)