

4th Semester

MCYC 401 Analytical Techniques-II (3-0-0)

Module I

(12 hours)

Thermal Techniques:

Thermogravimetry (TG), Differential gravimetric analysis (DTG) and Differential thermal analysis (DTA- instrumentation and techniques,

Radiochemical methods: decay reactions, growth of radioactivity, radiation detectors, tracer techniques.

Module II

(14 hours)

CD and Fluorescence spectroscopy

Module III

(14 hours)

Electroanalytical Techniques: Electrogravimetry, coulometry, voltammetry, polarography, conductometry, instrumentation, techniques and application.

Module IV

(10 hours)

Recommended Books

1. Principle and Applications of Thermal Analysis by Paul Gabbott, John Wiley & Sons (Blackwell Publishing), 2009.
2. Pretsch, Ernö, Bühlmann, Philippe, Badertscher, Martin, Structure Determination of Organic Compounds, 4th edition, Springer, 2009.
3. Lloyd R. Snyder (Author), Joseph J. Kirkland (Author) Introduction to Modern Liquid Chromatography Hardcover, 3rd edn., Wiley, 2009
4. Ian A. Fowles, Gas Chromatography, 2nd edition, John Wiley & Sons, Ltd, 1995.
5. D. Bliesner, Validating Chromatographic Methods: A Practical Guide, John Wiley & Sons, 2006
6. Jeffrey Simpson, Organic Structure Determination Using 2-D NMR Spectroscopy, 2012, Academic Press.