

Course outline for CHM C11. "Introduction to Instrumental Analysis"

All aspects of Modern Instrumentation will be introduced :

This will be a lecturer based course with additional tutorials.

Assessment will be through

- 3 x Assignments 40%
- 1 Mid Term Quiz = 20%
- 1 Final Exam = 40%

Atomic Detectors

- Atomic Spectroscopy
- Atomic Emission
- Atomic Mass Spectroscopy

Molecular Detectors

- Ultraviolet Visible Spectroscopy
- Fourier Transform Infrared Spectroscopy
- Nuclear Magnetic Resonance Spectroscopy
- Mass Spectrometry
- Luminescence,
Phosphorescence and Fluorescence.

Separations

- Gas Chromatography
- High Pressure Liquid Chromatography
- Capillary Electrophoresis

Microscopy

- Scanning Electron Microscopy
- Atomic Force Microscopy
- Scanning Tunneling Electron Microscopy
- X-ray Analysis

Advanced Hyphenated Analytical Instruments 1

- GC-MS
- LC-MS
- LC-NMR-MS
- LC-SPE-NMR-MS