

CHEM 5804 - Chemical Instrumentation

Fall 2026 Syllabus, Section 01, CRN 40770,

Credit hours: 4

Instructor

Clovis Linkous

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Public Instructor Information

Instructor Title: Clovis A. Linkous

Instructor Professional Qualifications: Bachelor of Science, Chemistry and Physics, Purdue University, 1976; Ph.D. Chemistry, Michigan State University, 1983.

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Course Description

5804. Chemical Instrumentation. The theoretical foundations of instrumental procedures and the use of instruments in analytical work. Two hours lecture, six hours lab. Prereq.: CHEM 3739. 4 s.h.

Instrumental methods to be covered in class and reinforced in the laboratory section include:

- Electronics
- UV-Visible Spectrophotometry
- Infrared Spectrometry
- Raman Spectroscopy
- Nuclear Magnetic Resonance
- Radiochemistry
- Gas Chromatography/Molecular Mass Spectrometry
- Inductively Coupled Plasma – Atomic Mass Spectrometry
- Powder X-ray Diffraction/X-ray Fluorescence
- Thermogravimetry
- Ion-Selective Electrode

Course Readings

Group	Title	Author	ISBN
Required	Principles of Instrumental Analysis		

Principles of Instrumental Analysis, Skoog, Holler, and Crouch, 6th Edition (2007). A 7th Edition (2018) is also available and, for the purposes of this course, identical to the previous edition.

The course readings are subject to change in the event of extenuating circumstances, research developments, current events, and/or to ensure better learning.

Schedule of Topics and Assignments

Day	Date	Proposed Topic	Due/To Prepare for Class
Mon	8/24	Students meet to discuss class	
Wed	12/9	Final Discussion	

The course schedule, policies, procedures, and assignments in this course are subject to change in the event of extenuating circumstances, by mutual agreement, and/or to ensure better learning.