

# Separations Chemistry

CHM 4932/6938



Explore the science and applications of chromatographic and electrophoretic separation techniques used across chemical, biomedical, pharmaceutical, petrochemical, and environmental industries. This advanced chemistry course will equip students with theoretical and practical understanding of methods such as gas chromatography (GC), high-performance liquid chromatography (HPLC), supercritical fluid chromatography (SFC), capillary electrophoresis (CE), and various hyphenated techniques.



Topics include:

- Retention mechanisms, resolution theory, and separation power
- Chromatographic instrumentation and detectors
- Method development strategies in GC, HPLC, and SFC
- Capillary and electrokinetic methods
- Applications of separation science in real-world problem-solving



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