

UNIVERSITY OF CALGARY
FACULTY OF SCIENCE
DEPARTMENT OF CHEMISTRY
COURSE SYLLABUS
FALL 2017

COURSE: CHEMISTRY 615, Analytical Separations

| LEC | DAYS | TIME | ROOM | INSTRUCTOR | OFFICE | PHONE | EMAIL | OFFICE HOURS |
|-----|------|-------------|---------|--------------|--------|----------|--|--------------|
| L01 | TR | 10:00-11:15 | EDC 278 | Dr. Thurbide | SB 219 | 220-5370 | thurbide@ucalgary.ca | TBA |

Blackboard course name: CHEM 615 L01 - (FALL 2017) – ANALYTICAL SEPARATIONS

Departmental Office: SA 229, 220-5341, chem.undergrad@ucalgary.ca

2. Course Description: The course will provide students with an understanding of separation science in both a classical and modern context. Basic chromatographic theory and the underlying principles for achieving separations will be discussed along with historical perspectives on significant scientific advances in the field. The primary areas of focus will be chromatography and detection. In addition to fundamental concepts, students will also be introduced to practical aspects and applications of chromatography as it relates to instrumental design, troubleshooting considerations, and method development.

3. Recommended Textbook: None. More about this will be discussed in class.

4. Topics Covered and Suggested Readings:

Overview:

- History of Chromatography
- Fundamentals of Separations
- Gas Chromatography
- Liquid Chromatography (including IEC, GPC)
- Supercritical Fluid Chromatography
- Capillary Electrophoresis
- Fundamentals of Detection
- GC Detectors
- LC Detectors