

UNIVERSITY OF CALGARY  
DEPARTMENT OF CHEMISTRY  
**COURSE SYLLABUS**  
**WINTER 2020**

**1. COURSE: CHEMISTRY 417, Modern Chromatographic Analysis**

LEC	DAYS	TIME	ROOM	INSTRUCTOR	OFFICE	PHONE	EMAIL	OFFICE HOURS
L01	TuTh	11:00-12:15	ENF 334	Dr. Thurbide	SB 219	220-5370	<a href="mailto:thurbide@ucalgary.ca">thurbide@ucalgary.ca</a>	TuTh12:30-1:30

To avoid IT problems, students must use their U of C account for all course correspondence. Please use "CHEM 417 inquiry" as the subject of your e-mail.

Departmental Office: Room SA 229, Tel: (403) 220-5341, e-mail: [uginfo@chem.ucalgary.ca](mailto:uginfo@chem.ucalgary.ca)

**2. Course Description:**

This course is designed to cover major aspects involved in the process of chromatographic analysis, which is paramount to many modern laboratories. Fundamentals of separation science will be discussed including partition theory, sample preparation concepts and methods, chromatographic theory, essential concepts in gas and liquid chromatography, and introductory principles of detection. Additionally, emerging concepts will also be presented in developing areas such as micro-fluidic separation platforms, column technology, and novel mobile phases.

**3. Recommended Textbook:**

There is no formal textbook for this course. However, some students may find the following (or others like it) a useful alternate reference to supplement topics covered in class. This will be discussed further in the opening lecture.

"Quantitative Chemical Analysis", D. C. Harris, 5<sup>th</sup> and higher Editions, W.H. Freeman.

**4. Topics Covered**

1. Sample Preparation
2. Basic Chromatographic Theory
3. Gas Chromatography
4. Liquid Chromatography
5. Other Separation Modes
6. Current Trends in Chromatography
7. Detection

**The following signature lines should be added to the course outline as appropriate**

Department Approval \_\_\_\_\_ Electronically Approved \_\_\_\_\_ Date \_\_\_\_\_ January 6, 2020 \_\_\_\_\_