

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

**1. Course: CHEMISTRY 425, Industrial Chemistry**

LEC	DAYS	TIME	ROOM	PROFESSOR	OFFICE	EMAIL	OFFICE HOURS
L01	TuTh	14:00-15:15	ST 130	Dr. G. Shimizu	SB 403	gshimizu@ucalgary.ca	W 12-1pm

To avoid IT problems, it is recommended that the students use their U of C account for all course correspondence. Please use "CHEM 425 inquiry" as the Subject of your e-mail.

Desire 2 Learn (D2L): CHEM 425 L01 - (Spring 2018) - Industrial Chemistry

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

**2. Course Description: Lectures:** A cross section of industrially relevant chemicals and processes will be presented. These will be discussed from the perspective of precursors (availability, cost), their products and uses, efficiency (catalysis, scalability) and sustainability (environmental impact, geopolitical factors).

**3. Recommended Textbook:** There is no required text for this course.

**4. Topics Covered:**

Chemical Industry  
 Transport of Chemicals  
 Green Chemistry  
 Chemicals from Petroleum  
 Products from Ethylene  
 Products from Propylene  
 Products from C4  
 Products from C5  
 Products from benzene  
 Products from xylenes  
 Products from methane/alkanes  
 Products from Coal  
 Polymers, synthesis, characterization and use  
 Catalysis, homogeneous/heterogeneous, common mechanisms  
 Chemical Separations and Energy  
 Process Chemistry  
 Intellectual Property

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