



UNIVERSITY OF CALGARY
FACULTY OF SCIENCE
DEPARTMENT OF CHEMISTRY
COURSE SYLLABUS
Winter 2019

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

LEC	DAYS	TIME	ROOM	PROFESSOR	OFFICE	EMAIL	OFFICE HOURS
L01	TR	2.00-3:15 PM	ST 143	Dr. Azfar Hassan	SA 246	azfar@ucalgary.ca	T 4-5 pm

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 - (Winter 2019) - 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
Unit Operations
Chemicals from Petroleum
Products from Ethylene
Products from Propylene
Products from C4
Products from C5
Products from benzene
Products from methane/alkanes
Separation of gases and energy cost
Fats and oils
Carbohydrates
Products from Coal
Polymers, synthesis, characterization and use
Catalysis, homogeneous/heterogeneous, common mechanisms
Green Chemistry

Department Approval: Approved by Department Head Date: January 7, 2019