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

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<td>2.00-3:15 PM</td>
<td>ST 143</td>
<td>Dr. Azfar Hassan</td>
<td>SA 246</td>
<td><a href="mailto:azfar@ucalgary.ca">azfar@ucalgary.ca</a></td>
<td>T 4-5 pm</td>
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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