

UNIVERSITY OF CALGARY
DEPARTMENT OF CHEMISTRY
COURSE SYLLABUS
FALL 2016

CHEM 571 Physical Chemistry of Interfaces

TOPICS TO BE COVERED

- **Introduction**
 - Definition of interfaces, the importance of surface or interfacial properties, applications of interfacial chemistry

- **Surface Tension, Surface Energy, and Thermodynamics of Interfaces**
 - Surface tension and surface energy, intermolecular forces, van der Waals forces between macroscopic particles, thermodynamics of interfaces

- **Liquid Surfaces, Contact Angles, and Wetting**
 - The Young-Laplace Equation, contact angles and wetting, measuring surface tension and contact angles, the Kelvin Equation

- **Solid Surfaces and Solid-gas interfaces**
 - Crystalline surfaces, adsorption, experimental techniques of surface characterization

- **Solid-Liquid Interfaces**
 - Charged interfaces, electric double layers, electrochemistry

- **Applications of Interface Chemistry**
 - Including student poster presentations