

CHM4785 Industrial Chemistry

Course Description:

Industrial chemistry plays a vital role as an applied science in diverse areas that influence human society, ranging from economic, environmental to political stability. This course explores the relationship between industrial activities and their importance to our society. Students will learn important chemical processes used in industry, ranging from the large-scale production of bulk chemical commodities, industrial gases, fertilizers, petrochemicals and polymers. The course will also examine the emerging environmental issues related to the expanding industrial activity and discuss the future industries based on insights from environmental chemistry.

Main Course Outline (for reference only):

1. The Chemical Industry – An Overview
2. Chemicals from Natural Gas and Petroleum
3. Chemicals from Renewable Resources
4. Polymers – Synthesis and Characterization
5. Industrial Catalysis
6. Major Bulk Inorganic Chemicals
7. Patents and Trademarks