

Syllabus

(1) Sulfur and Sulfuric acid

- Sulfuric acid
- Sulfur

(2) Nitrogen Industries

- Ammonia
- Nitric acid
- Urea

(3) Phosphorous Industries

- Phosphoric acid

(4) Chlor-alkali Industry

- Soda ash
- Caustic soda
- Chlorine

(5) Edible and Essential oils

- Vegetable oil

(6) Soaps & detergents

- Soap
- Detergents

(7) Carbohydrates and Fermentation Industries

- Sucrose
- Starch
- Ethyl alcohol

(8) Pulp and paper industry

- Pulp
- Paper
- Cellulose

(9) Chemicals from aromatics

- Phenol
- Dyes
- Pharmaceuticals: Alkylation, Carboxylation, Condensation, Dehydration, Halogenation, Sulphonation, Amination

(10) Biorefinery

- Production of biofuels
- Production of bio-based chemicals
- The biorefinery

(11) Oil Refining

- Desalting and dehydration
- Crude distillation
- Thermal Processes: Visbreaking and Delayed coking
- Catalytic cracking: Octane and cetane number, Catalytic cracking
- Hydroprocessing: Hydrotreating, hydrocracking

(12) Production of Synthesis Gas

- Synthesis gas from Natural Gas
- Coal Gasification
- Cleaning and conditioning of Synthesis gas: acid gas removal

Note: Tutorial classes will be held on: 7th Sept., 14th Sept., 28th Sept., 5th Oct., and 19th Oct. Aspen Plus V8.8 will be used in tutorial classes for modeling chemical processes.

Users Guide for Installation of aspenONE V8.8 can be found at:

<http://www.iitg.ac.in/tamalb/software.html>