0

Department of Chemical Engineering	
Petroleum Refining (64563)	
Total Credits	**2**
major compulsory	
Prerequisites	P1 : Unit Operation (64362)

Course Contents

The course is intended to provide students a clear overview of petroleum refining processes, operations, feedstocks and products. Configurations of refinery processes and their evolution will be discussed in view of environmental efficiency and economic considerations. Current trends and future of the industry will be addressed.

	Intended Learning Outcomes (ILO's)	Student Outcomes (SO's)	Contribution
1	Identify, formulate and solve engineering problems related to petroleum processing and refining.	E	25 %
2	Understand the impact of engineering solutions in petrochemical technologies and petrochemical products in a global and societal context	H	25 %
3	Recognize of the need and the ability to engage in life-long learning in petroleum industry.	I	25 %
4	Identify and analyze the effect of petroleum industry on economical and environmental issues.	J	25 %

Textbook and/ or Refrences

Textbook Gary J. H., Handwerk G. E., Petroleum Refining, Technology and Economics, CRC 4th Edition, 2001

Assessment Criteria	Percent (%)
First Exam	20 %
Second Exam	20 %
Projects	10 %
Presentation	10 %
Final Exam	40 %

Course Plan

Week	Topic
1-15	1) Introduction and overview of petroleum refinery 2) Refinery feedstocks 3) Refinery products and testing 4) Crude oil processing and production: a) Crude Distillation b) Catalytic cracking c) Catalytic Hydrocracking d) Catalytic reforming and isomirization e) Alkylation and polymerization f) Product Blending 5) Lubricating oil blending stocks 6) Petrochemical feed stocks 7) Petrochemical products