

Year & Sem: E3S1	Course Code: CH3103	Course Name: Petroleum and Petrochemical Technology	No. of Credits: 4	L 2	T&PS 2	P 0
<p>UNIT I: Origin, formation and composition of petroleum: Origin and formation of petroleum, Reserves and deposits of world, Indian Petroleum Industry. Petroleum processing data: Evaluation of petroleum, thermal properties of petroleum fractions, important products, properties and test methods.</p> <p>UNIT II: Fractionation of petroleum: Dehydration and desalting of crudes, heating of crude pipe still heaters, distillation of petroleum, blending of gasoline. Treatment techniques: fraction-impurities, treatment of gasoline, treatment of kerosene, treatment of lubes.</p> <p>UNIT III: Thermal and catalytic processes: Cracking, catalytic cracking, catalytic reforming, Naphtha cracking, coking, Hydrogenation processes, Alkylations processes, Isomerization process.</p> <p>UNIT IV: Petrochemical Industry – Feed stocks Chemicals from methane: Introduction, production of Methanol, Formaldehyde, Ethylene glycol, PTFE, Methylamines.</p> <p>UNIT V: Chemicals from Ethane-Ethylene-Acetylene: Oxidation of ethane, production of Ethylene, Manufacture of Vinyl Chloride monomer, vinyl Acetate manufacture, Ethanol from Ethylene, Acetylene manufacture, Acetaldehyde from Acetylene.</p> <p>References/Text Books:</p> <ol style="list-style-type: none"> 1. Petroleum Refining Engineering, 4th ed., W.L. Nelson, McGraw-Hill, New York, 1958. 2. Modern Petroleum Refining Processes, 4th ed., B.K. Bhaskara Rao, Oxford & IBH Publishing, 2002. 3. Shreve's Chemical Process Industries, 5th ed., G.T. Austin, McGraw –Hill, New York, 1984. 4. Chemical Technology of Petroleum, W.S. Gruesse and D.R. Stevens, McGraw-Hill, 1980 <p>Lecture Plan: Unit-I & -II syllabus for MID-I, Unit-III & -IV syllabus for MID-II and Unit-V & -VI syllabus for MID-III examinations.</p> <p>Video Lectures (Web Links):</p> <ol style="list-style-type: none"> 1. 2. <p>Study Materials (Web Links):</p> <ol style="list-style-type: none"> 1. 2. <p>Problems & Solutions (Web Links):</p> <ol style="list-style-type: none"> 1. 2. 						