

Year & Sem:E4S2	Course Code: CH4202	Course Name: Industrial Safety and Hazard Management	No. of Credits: 4	L 2	T&PS 2	P 0
<p>UNIT I: Introduction: Safety program, Engineering ethics, Accident and loss statistics, Acceptable risk, Public perception.</p> <p>UNIT II: Toxicology: How toxicants enter biological organisms, How toxicants are eliminated from biological organisms. Industrial Hygiene: Government regulations, Identification, Evaluation, Control.</p> <p>UNIT III: Fires and Explosions: The fire triangle, Distinction between fire and explosions; Definitions, Flammability characteristics of liquids and vapors, MOC and inerting, ignition energy, Auto ignition, Auto oxidation, Adiabatic compression, Explosions.</p> <p>UNIT IV: Designs to prevent fires and explosions: Inerting, Explosion proof equipment and instruments, Ventilations, Sprinkler systems. Introduction to Reliefs: Relief concepts, Definitions, Location of reliefs, Relief types, Data for sizing reliefs, Relief systems.</p> <p>UNIT V: Relief Sizing: Conventional spring operated relief's in liquids, Conventional spring operated relief's in vapor or gas service, Rupture disc relief's in liquid, vapour or gas service. Hazards Identification: Process hazards checklists, Hazard surveys, Hazop safety reviews.</p> <p>References/Text Books:</p> <ol style="list-style-type: none"> 1. Chemical Process Safety (Fundamentals with applications), D.A.Crowl & J.F.Louvar, Prentice Hall, New Jersey,(1990). 2. Safety and Accident Prevention in Chemical Operations, 2nd ed., H. H. Fawcett and W.S. Wood, John Wiley and Sons, New York 1982 3. Coulson and Richardson's – Chemical Engineering, Vol.6, R.K.Sinnot, , Butterworth-Heinmann Limited 1996. <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. <p>Assignments (Web Links):</p>						