

Date: November 7, 2014

From: G.W. Norval

RE: Lecture Plan for CHE334S

Lecture	Subject	Materials/concepts	Other AV Items
1	Introduction and Meetings	Introduction; Purpose, Plan, Progress, Payoff	Video – Meetings, Bloody Meetings
2	Teamwork + Myers Briggs	What is a team; Individuals vs groups vs teams; Forming, Norming and Performing; team skills; Personalities and their impact on learning	http://www.ltscotland.org.uk/video/1/lalinfolearningstyles.asp
3	Decision making	People's Behaviour Slides	Imperial Oil Slides
4	Risk Management	Slides part 1	Why do a water trial?
5	Accidents	Slides "Seveso	Why I lost my Job Today
6	Risk Management	Slides Part 2	
Reading Week			
7	Fires and explosions	Fires and explosions slides	piping
8	Human Errors	Human errors	
9	Flixborough	Fires and Explosion	Flixborough videos
10	Worked Examples	Do some fires and explosion calculation on the board	
11	Inherently Safer Design	Slides "Inherently Safer Design"	
12	Worse Case Scenarios	Worse Case Scenarios;	
13	Review/assessment	Leadership	

I may change this, and add Lac Megantic. We will see how the term goes.

Tutorial Plan

Tutorial	Lecture weeks	Tutorial Topic and Goal
1 Jan 10,12,17	1-2	Introduce activities; have students make agenda, have students norm; generate work list of all activities (group and individual); generate minutes; introduce MBTI
2 Jan 19, 24, 26	2-3	Teams to have agenda and worklist; start excel mass and energy balance for project; generate preliminary process sketch with stream numbers; generate mass and energy balance; estimate reactor size – for isothermal case – linked spreadsheet
3 Jan 31 Feb 2, 7	4-5	Teams to have agenda and worklist; review and update mass balance; discuss goal for separation equipment (distillation or absorption?) add recycle to the process diagram and upgrade mass and energy balances
4 Feb 9, 14,16	5-6	Teams to have agenda and worklist; review and update excel spreadsheets teams to reflect on hazard scenarios for their process – is higher temperature and pressure operation preferred? Begin a sketch of a P&ID Begin a draft of final report
5 Feb 28 Mar 1, 6	7-8	Teams to have agenda and worklist; Review mass and energy balance, and P&ID Teams to move to adiabatic reactor design Teams to begin detailed separator design Update progress on report
6 Mar 8, 13, 15	8-9	Teams to have agenda and worklist; Review progress Upgrade P&ID and equipment sizing Begin to document the impact of 7 deviations Update final report
7 Mar 20, 22, 27	10-11	Teams to have agenda and worklist; Review progress Teams to begin a simple ASPEN model to confirm their reactor estimations (they don't start ASPEN – unless they have finished the other estimates) Update final report
8 Mar 29 Apr 3, 5	11-12	Teams to have agenda and worklist; Review progress and fill the gaps