

**FPST 4333 System and Process Safety Analysis - Online**  
**Course Outline & Schedule Fall 2022**

Wk	Date	Lecture/Lab Subject (bring laptop, calculator, pencil and straight edge to lab each week)	Reading Assignment	Homework generally due by the start of lecture Lab Assignments generally due at the end of lab (unless otherwise noted in Canvas)
1	08/22/22	Course syllabus & Introduction	Canvas Mod1	HW1 Syllabus Quiz
	08/23/22	Lab1 Statistics/Probability Review		Lab1 Statistics/Probability Review
	08/24/22	Intro to System Safety	Ch 1-2	HW2 Ch 1-2 Canvas Quiz
2	08/29/22	Hazard Analysis	Ch 3, 4, 5	HW3 Ch 3-5 Canvas Quiz
	08/30/22	Lab2 Engineering Symbology	Canvas Mod2	Lab2 Engineering Symbology
	08/31/22	Preliminary Hazard List/Preliminary Hazard Analysis (PHL/PHA)	Ch 7, 8	HW4 Ch 7-8
3	09/05/22	University Holiday - Labor Day No Class		
	09/06/22	Lab3 PHL/PHA		Lab3 PHL/PHA
	09/07/22	OSHA Process Safety Management	Canvas Mod4	HW5 AICHE CCPS ELA950 Intro to Process Safety
4	09/12/22	OSHA Process Safety Management	Ch22	
	09/13/22	Lab4 PSM/RMP		Lab4: PSM/RMP
	09/14/22	Hazard and Operability Analysis (HAZOP)	Ch 17	HW5 CH 17&22
5	09/19/22	Hazard and Operability Analysis (HAZOP)		
	09/20/22	Lab5 HAZOP		Lab 5: HazOp
	09/21/22	OSHA Process Safety Management		
6	09/26/22	OSHA Process Safety Management		
	09/27/22	Lab6 Facility Siting	Canvas Mod6	Lab6 Facility Siting
	09/28/22	System Hazard Analysis/Subsystem Hazard Analysis (SHA/SSHA)	Ch 9-10	
7	10/03/22	Operating and Support Hazard Analysis (O&SHA)	Ch 11	HW6 Ch 9, 10, 11
	10/04/22	Lab7 Equipment Relationships		Lab 7 Equipment Relationships and Operating Sequence
	10/05/22	Equipment Reliability bring Calculators	Canvas Mod7	
8	10/10/22	Mid Term Exam		
	10/11/22	Equipment Reliability bring Calculators		In-class Exercise
	10/12/22	Event Tree Analysis (ETA)	Ch 18	

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9	10/17/22	Event Tree Analysis (ETA)		
	10/18/22	Lab8 Event Tree Analysis (ETA)		Lab9 ETA
	10/19/22	Fault Tree Analysis	Ch 15	
10	10/24/22	Fault Tree Analysis		HW7 Ch 15&18
	10/25/22	Lab9 Fault Tree Analysis (FTA)		Lab10 Fault Tree Analysis
	10/26/22	Layer of Protection Analysis	Canvas Materials	
11	10/31/22	Layer of Protection Analysis		
	11/01/22	Lab12 Layer of Protection Analysis		Lab14 AIChE CCPS Webinar ELA 980 Layer of Protection Analysis
	11/02/22	Bow-Tie Analysis	Canvas - Bowtie Book	
12	11/07/22	Bow-Tie Analysis		HW8 (Bowtie book)
	11/08/22	Lab10 Bow-Tie		Lab11 Bow-tie Analysis
	11/09/22	Pre-Startup Safety Review	Canvas Materials	
13	11/14/22	Pre-Startup Safety Review		
	11/15/22	<b>Lab 13 - CEAT Design Project - PSSR</b>		<b>Lab 13 - PSSR</b>
	11/16/22	Failure Modes and Effects Analysis	Ch 16	HW9 Ch16
	11/21/22	University Holiday - Fall Break & Thanksgiving Holiday - No Class/Lab		HW11 Three AIChE CCSP Webinars of your choice
14	11/28/22	Failure Modes and Effects Analysis		
	11/29/22	Lab14 Failure Modes and Effects Analysis		Lab 14: FMEA
	11/30/22	Inherently Safer Design	Canvas Materials	
15	12/05/22	Inherently Safer Design		
	12/06/22	Lab15 Inherently Safer Design		Lab15 AIChE CCPS Webinar ELA984 Inherently Safer Design
	12/07/22	Final Exam Review		HW 10 AIChE Webinars of Choice
	12/12/22	<b>Final Exam Friday December 16, 2022 10:00 am - 11:50 am China Time</b>		

updated as of 8/24/2022