

Dow/CCPS SChE Faculty Workshop
June 12-15, 2017, Freeport, TX

Monday, June 12: Welcome Dinner at Dow Plantation House: 6:00 – 9:00 (with group photo)

Tuesday, June 13: Hazard Understanding /Identification and Lines of Defense

Start	Welcome to Dow!	7:30 – 7:45
Introduction	“A Look Back in Time”: video history of Dow Process Safety	7:45 – 8:15
Panel	Dow organization: Roles for new engineers and what Process Safety knowledge they require	8:15 – 9:00
Break	Refreshments	9:00 – 9:15
Presentation	Description of the PDH process (workshop problem)	9:15 – 9:30
Presentation	Types of hazards/serious industrial incidents <ul style="list-style-type: none"> - Toxic - Reactive - Flammable - Others (e.g., asphyxiation, burns, overpressure, vacuum) 	9:30 – 11:30
Lunch	Lunch	11:30 – 12:15
Presentation	Hazard scenario identification <ul style="list-style-type: none"> - Previous incidents and experiences - Process hazard analysis (e.g., HAZOP) 	12:15 – 1:00
Exercise	Process hazard analysis of the PDH process	1:00 – 1:45
Presentation	Lines of defense: Preventive safeguards <ul style="list-style-type: none"> - Instrumentation - Human action 	1:45 – 2:30
Break	Refreshments	2:30 – 2:45
Presentation	Lines of defense: Preventive safeguards (continued) <ul style="list-style-type: none"> - Relief systems 	2:45 – 3:30
Exercise	Preventive safeguards for the PDH process	3:30 – 4:00
Wrap Up	Wrap up	4:00 – 4:15
Dinner	Dow Reservoir – catered by Brian’s BBQ	6:00 – 9:00

Wednesday, June 14: Lines of Defense (continued)/Inherently Safer Design/Lab and Reactive Chemicals Screening and Testing

Start	Review of Agenda	7:30 – 7:45
Presentation	Lines of defense: Mitigative safeguards <ul style="list-style-type: none"> - Personal protective equipment - Dikes and containment - Scrubbers and flares - Fire protection systems 	7:45 – 8:30
Exercise	Identify mitigative safeguards for the PDH	8:30 – 9:00
Tour	Tour of PDH Unit	9:00 – 11:45
Lunch	Lunch	11:45 – 12:45
Discussion	Review of tour and lines of defense seen on PDH tour	12:45 – 1:15
Presentation	The Onion Diagram: How a collection of safeguards become a protection strategy	1:15 – 1:45
Presentation	Inherently safer design	1:45 – 2:15
Break	Refreshments	2:15 – 2:30
Presentation	Lab safety	2:30 – 3:15
Presentation	Reactive chemicals screening/testing	3:15 – 4:00
Wrap Up	Review of the day/schedule for the next day	4:00 – 4:15
Dinner	Lake Jackson Historical Museum – Catered by Affairs to Remember	6:00 – 9:00

Thursday, June 15: Consequence Assessment/AIChE Tools/Integration into Undergraduate Curriculum

Start	Review of Agenda	7:30 – 7:45
Presentation	Consequence evaluation/How many protection layers?	7:45 – 8:45
Exercise	Workshop using the CHEF tool	8:45 – 9:15
Break	Refreshments	9:15 – 9:30
Presentation	AIChE tools	9:30 – 10:00
Discussion	How to integrate learnings in an undergraduate curriculum?	10:00 – 10:45
Feedback	Complete class evaluation	10:45 – 11:00
Wrap Up	Concluding remarks	11:00 – 11:15
Lunch	Boxed lunch provided	11:15 – 12:00
Departure	Transportation to airports	12:00 – 1:30