Course Title: DIERS' Advanced Emergency Relief System Design

Course ID:	**Course Type:**
CH173	Instructor-led (classroom) Course
http://www.aiche.org/ch173	

Course Schedule

Day One

8:00 – 8:30	Registration
8:30 – 10:00	Introduction to ERS Design • DIERS/DIERS Users Group • Case Histories • ERS Design Goals/Strategy
10:00 – 10:15	Morning Break
10:15 – Noon	Introduction to ERS Design (continued) • Energy/Material Balances; Physical Property Treatment • Impact of Two-Phase Vessel Venting and ERS Flow • Codes, Terms, Devices, and Rules
Noon – 1:00	Lunch Break
1:00 – 3:00	Vessel Disengagement Dynamics • Two-Phase Venting Conditions • Coupling Equation; Vapor/Liquid Disengagement Models
3:00 – 3:15	Afternoon Break
3:15 – 5:30	Vessel Disengagement Dynamics (continued) • Experimental Verification • Prediction of Two-Phase Flow Onset/Disengagement

Day Two

8:00 – 10:00 Vent Flow Dynamics
- Technology Base (Two Phase Flow Methods)
- Fundamental Flow Equations
- Experimental Verification

10:00 – 10:15 Morning Break

10:15 – Noon Vent Flow Dynamics (continued)
- Code Compliant Design
- Calculation via "CCflow" programs on provided CDROM
- Example Problems in provided texts

Noon – 1:00 Lunch Break

1:00 – 3:00 Simplified Reactive Case ERS Design
- Data Acquisition via Bench-Scale Testing

3:00 – 3:15 Afternoon Break

3:15 – 5:30 Simplified Reactive Case ERS Design (continued)
- Experimental Reactive Case ERS Design
- Simplified Reactive-Case Design Equations with Example Problems

Day Three

8:00 – 10:00 Computerized ERS Design Methods (Simulation)
- Advantages of Design by digital simulation; Example Problem

10:00 – 10:15 Morning Break

10:15 – Noon Computerized ERS Design Methods (continued)
- SuperChems for DIERS Capabilities and Demonstration

Noon – 1:00 Lunch Break

1:00 – 3:00 ERS Effluent Handling
- Effluent Handling Strategies, Separators and Quench Pool Designs
- Example Effluent Handling Problems Using "CCflow" programs on provided CDROM

