

Course 418
Control of NO_x Emissions
Tentative Classroom Agenda

Date/Time	Chapter	Subject
Day 1		
8.00-9.00		Introduction and Organization of the Course
9:00-10:00		Pre-Test
10:00-10:15 AM		Break
0:15-11:00 AM	1	<u>Introduction to NO_x Control</u> Regulation of NO _x ; Definition of NO _x ; Origins of NO _x ; NO _x Formation Mechanisms in Combustion Processes. Anthropogenic Sources NO _x Emission Trends Ozone Seasonal Emissions Emissions Projections
11:15-12:00 PM	2	<u>NO_x Regulatory Programs</u> Introduction; NO ₂ NAAQS; Ozone NAAQS; Pm ₁₀ and PM _{2.5} NAAQS; Visibility Impairment; Historic Review of Ozone Control Strategies; Acid Rain Other Programs
12:00-1:00 PM		Lunch
1:00-2:30 PM	3	<u>Combustion Systems & NO_x</u> Diffusion and Premixed Flames Flame Temperatures Boiler Burners Reciprocating Engines Combustion Turbines
2:30-2:45 PM		Break
2:45-5:00 PM	4	<u>NO_x Control by Reducing Temperature</u> Flame Temperature and NO _x Water Injection Flue Gas Recirculation Lean Premixed Combustion Summary
5.00		ADJORN

Day 2

8:00-10:00 AM	5	<u>Oxygen Based NO_x Controls</u>
10:00-10:15 AM	Break	
10:15-12:00 AM	6	Reciprocating Internal Combustion Engines Combustion Control Post-Combustion Control Case Study
12:00-1:00 PM	Lunch	
1:00-2:15 PM	7	Gas Turbines Introduction Combustion Modification Controls Post Combustion Controls
2:15-2:30 PM	Break	
2:30-4:15 PM	8	Back End Controls Selective Non-Catalytic Reduction (SNCR) Selective Catalytic Reduction (SCR) Non-Selective Catalytic Reduction (NSCR) Emerging Technologies
4:15-5:00 PM	Review of Pre-Test	
5.00	ADJORN	

Day 3

8:00-10:00 AM	9	Emission Measurement, Monitoring & Reporting CEM Regulatory Program Measurement Techniques CEM Systems Quality Assurance and Quality Control Oxygen Concentration Monitors Emissions Calculations
10:00-10:15	Break	
10:15-12:00 AM	10	Inspecting Permitted Emission Sources
12:00-1:00 AM	Lunch	
1:00-2:00	Review of APTI Course 418 Student Manual Exercises	
2:00-2:15	Break	
2:15-2:45	Course Evaluations	
2:45-4:45	Post-test	
4:45-5:00	Gather Personal Belongings	
5.00	COURSE ADJORN	