

Innovations in Emission Reduction Technologies

Training Course	Innovations in Emission Reduction Technologies
Course Language	English
Course Duration	Total Number of hours: 15 hours
Course Objectives	Overall scientific understanding of emission mechanisms with strategic evaluation and practical implementation of green technologies in different combustion systems.
Course Content	Course Key Topic Area Includes: 1. Identify Emission Sources and Environmental Effects. 2. Carbon Capture Technologies. 3. Low-Carbon and Sustainable Fuels. 4. Transport and Mobility Clean Tech. 5. Industrial De-carbonization Technologies.
Learning Outcomes	At the end of the program the trainees will be able to: 1. Technology Assessment: Evaluate advanced low-carbon technologies including carbon capture, and renewable and sustainable integration. 2. Industrial De-carbonization: Understand sectoral emissions profiles. 3. Strategic Decision-Making: Formulate actionable investment plans for the diffusion of early-stage green innovations. 4. Energy Systems Comparison: Analyzing power conversion technologies. 5. Alternative and Sustainable Fuels: Leveraging heat pumps, biomass, and sustainable fuels for decarbonization.

Target Audience

All management and technical people in the industrial sector can benefit from this course, especially those work in oil and gas, manufacturing, transportation, and construction companies.

Course Material /Technology used/ Details Relevant to the course.

Course slides, notes and animation videos will be provided by the instructor. In addition, some reference materials will be recommended by the instructor for more detailed information.

Instructor Details & Brief Instructor Bio

Name: Prof. Samer Ahmed
Title/Dept: Head of Mechanical and Industrial Engineering
Department
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Prof. Samer Ahmed is a professor of Mechanical Engineering, and the founder and CEO of ClearExhaust LLC. He obtained his PhD degree from the University of Cambridge in the UK in 2007. He is the inventor of the two developed products of the company so far; the Smokeless Exhaust System and the Portable Carbon Capture System. His research interest is in the area of combustion and emissions, alternative fuels and carbon capture technologies. Prof. Ahmed has a strong record of leading research projects funded from governmental and industrial sectors such as QRD, QNRF, British Council, Oryx GTL Company, QAFCO Company and McDarment Company with more than \$6M of total research fund.