



TRAINING BOOKLET

“Air quality control and urban waste disposal: technical and management planning aspects”

8 April – 21 April

Shanghai Environmental Protection Bureau

Course Description

The course addresses the main regulatory, technical and planning approaches for the definition and implementation of proper air quality control and urban waste management strategies. The course tackles environmental policies within the urban context, but also in the industrial one, as well as the regional/national level regulation.

The course gives emphasis to the cross-media aspects involved in air quality and waste treatment, recovery and management operations, through the illustration of several case studies both in Europe and in Italy. These represent reference strategies for achieving efficiency in the use of resources within the general framework of environmental sustainability.

The course will first deal with air pollution issues, analyzing regulatory, scientific, technical and management concepts involved in the proper definition of control, remediation and maintenance strategies. Lectures will delve into the basic concepts of air pollution and related effects for the regulatory strategies for health and environment protection from harmful effects. Hence, the most appropriate approaches for matching regulatory requirements and control technologies for air remediation and maintenance will be presented.

Trainers' biographies



Stefano Cernuschi Full professor of Environmental Engineering and Air Pollution Control Technologies at Politecnico di Milano. He holds a Ph.D. degree in Sanitary-Environmental Engineering. His main scientific and research fields include air quality evaluation and control, gaseous emissions characterization, air pollution control technologies, solid waste treatment and disposal and related environmental effects. He has authored and coauthored over 120 papers on these topics in the international and national scientific literature, whilst acting also as main scientific responsible of research activities in the same fields of interest. He is President of the scientific committee of LEAP (Energy and Environmental Laboratory of Piacenza), a consortium participated by Politecnico di Milano, and was President of the Program Board of Environmental and Land Planning

Engineering graduate course at the same university.



Giovanni Lonati He graduated in Civil Engineering, Hydraulic specialisation, at Politecnico di Milano in 1993. In 1996, he obtained a Ph.D. degree in Sanitary Engineering at Politecnico di Milano in 1996.

Former researcher and assistant professor, he is now Associate Professor at the Civil and Environmental Engineering Department of Politecnico di Milano. Since 2000, his teaching activity has focused on the field of environmental engineering, with particular attention for air pollution control technologies and atmospheric pollution.

His main research interests include statistical analysis of air pollution data, ambient air measurements and chemical speciation of airborne particles.



Giorgio Guariso He graduated with honors in Electronic Engineering in 1976. He has been working with the Egyptian Academy for Research and Technology, Cairo (Egypt), with the Italian National Research Council. In 1987, he became Associate Professor of Systems Analysis at the Department of Electronics and Information at Politecnico di Milano. Since 1994, he is Full Professor at the same department, where he teaches courses on modelling and simulation. He has always focused his research on the development of environmental models and decision support systems. He is associate editor of the "Environmental Modelling and Software" Journal, and from 2006 to 2008 was President of the International Modelling and Software Society. He is currently a member of the Academic Senate of Politecnico di Milano. He has published more than 140 technical papers on national and

international journals and two international books.



Mario Grosso He is an environmental engineer graduated at Politecnico di Milano. He holds a PhD on dioxin formation and destruction in waste incineration plants. He is currently Associate Professor at the Department of Civil and Environmental Engineering of Politecnico.

He coordinates the AWARE (Assessment on WASTE and REsources) research group, aimed at researching on waste prevention, technologies for recovery and disposal of solid waste, integrated waste management, flue gas treatment technologies for industrial plants, as well as Life Cycle Assessment (LCA).

He teaches “Solid waste management and treatment” and “Bio-energy and waste-to-energy technologies” at Politecnico di Milano, as well as “Principles of technologies for environmental protection” at L. Bocconi University.



Raffaella Pomi She is a Ph.D. in Environmental Engineering and Associate Professor in Sanitary and Environmental Engineering at La Sapienza University in Rome. She is a member of the International Working Group pHOENIX on Management of Municipal Solid Waste Incineration Residues. Further, she is an active member of Sediment Management and Waste Management projects also in Developing Countries. She has authored more than 40 papers on International and National Journals, and more than 60 Papers on Proceedings of International Conferences. She has lectured at the University of Vienna (Austria). She has numerous collaborations with industries and research institute on topics related

to hazardous waste treatment and disposal. She collaborates with industries and research institutes for waste management projects. She is an expert evaluator for the EU commission.



Alessandra Poletti She is Associate Professor at the Department of Civil and Environmental Engineering of La Sapienza University in Rome. Here, she chairs the undergraduate and postgraduate programs in Environmental Engineering. She teaches Sanitary and Environmental Engineering and Solid Waste Treatment”. Her research focus includes treatment and recycling of residues from the thermal treatment of waste, anaerobic digestion of biodegradable organic wastes, environmental behaviour of waste materials, and treatment of contaminated dredged sediments. She has co-authored about 200 scientific papers, published in international journals or presented to international conferences.