Dear NACA Member,

The National Association for Clean Air (NACA)

Short Course Announcement

Introduction to Air Dispersion Modelling

A 3-day introductory course and practical aspects of setting up and operating the AERMOD Gaussian Plume Model using Lakes Environmental Software
Certificate of Attendance

Dates:	From Monday, 17 March to Wednesday, 19 March 2014
Venue:	Shelanti Conference Centre, 263 Jean Avenue, Lyttleton (Centurion)
Times:	Daily 09:00 – 17:00
Instructors:	(To be confirmed) Dr Gerrit Kornelius **(GK) Course Leader,** Department of Chemical Engineering, University of Pretoria & Associate, Airshed Planning Professionals Prof Harold J Annegarn **(HJA)**, University of Johannesburg Prof Hannes Rautenbach **(HR)**, University of Pretoria
Who should attend:	Current or aspirant air quality practitioners in the public and private sector, specifically persons responsible for performing or evaluating applications for Air Emissions Licences, based on dispersion modelling. Intending participants should have at the minimum knowledge of the basics of meteorology and air quality management.
Participation:	A maximum of 20 participants will be accepted. The organisers reserve the right to select applications on the basis of an applicant's prior experience and qualifications. The organsisers reserve the right to cancel the course should the required minimum number of participants (10) not be met.
Certification:	Participants will be given a Certificate of Attendance. There will be no formal competency testing.
Registration:	Complete the form below and return to Bev Terry at bev@naca.org.za Participants will be notified by email of acceptance on the course.
Closing date:	You are kindly requested to submit a completed application form by Friday, 7 March 2014.
Costs:	**R8,000.00** (Including VAT) per participant. Bank issued Proof of Payment or an approved purchase order must be submitted to Bev Terry before the commencement of the course. Fee includes participation in the course, a full set of printed notes and CD disk, cost of certificate, lunches, and morning and afternoon refreshments.
Payment:	Payment should be made to the National Association for Clean Air, with surname and AERMOD as reference. Invoices will be issued by the National Association for Clean Air on request.
Cancellation:	Cancellations will be accepted up until 10 March 2014. All course fees will be forfeited, with any cancellation after the said date. Substitutions may be made. Please send an e-mail notification of your cancellation or substitution to Bev Terry, Course Coordinator, at 071 683 9770 or bev@naca.org.za.
Accommodation:	Assistance will be provided for out of town delegates who wish to stay in bed and breakfast establishments in Hatfield. Cost of accommodation and transport are not included in the course fee.
Enquiries:	If you need more information, please do not hesitate to contact Bev Terry, Course Coordinator, at 071 683 9770 or bev@naca.org.za
Course content:	See attached programme for programme of lectures and course content.

Introduction to Air Dispersion Modelling
Short Course Registration Form

Shelanti Conference Centre, Lyttleton, 17 to 19 March 2014

Surname: .....

First Name: ..... Title: .....

SA ID number or passport Number .....

Designation: .....

Company/Organisation: .....

Postal Address: .....

.....

.....Code: .....

Fax: ..... Tel: .....

Cell: ..... E-mail: .....

Highest educational qualification: Matric ☐; BSc☐; BSc Hons ☐; MSc ☐; Other ☐ (specifiy): .....

Current job description: .....

Previous years and level of experience in air quality management or atmospheric sciences? .....

.....

I wish to attend the Air Quality Mangement Short Course @ R8,000 **(including VAT)**

Name of person or institution responsible for paying the account:

.....

I acknowledge that in submitting the above registration that I/(company named above) hold ourselves liable for the full fee for the course registration, if not cancelled before the specified date.

Signature..... Name (block letters).....

Date ..... Designation .....

If fees have not been made in full prior to start of the course, or satisfactory arrangements made for payment, the organisers resercve the right to exclude participation..

An invoice will be issued by the National Association for Clean Air, containing details for electronic payment.

Please return to*:* Bev Terry, Conference Coordinator, NACA,
P O Box 8370, Halfway House, 1685 or email/FAX to

E-mail: bev@naca.org.za Cell: 071 683 9770.

Introduction to Air Dispersion Modelling

Provisional Programme and Course Content

Shelanti Conference Centre, Lyttleton, 17 to 19 March 2014

The course will comprise approximately 21 hours of lectures, including 7 hours of practical work using dispersion models. Students will be expected to spend time reading supplied course materials, as well as supplementary readings.

A comprehensive file of printed course materials will be supplied. A CD-ROM disk, containing the MS-PowerPoint presentations of the presented lectures will be distributed during the course. Access to a short term license of the Lakes Environmental Dispersion model will be provided.

Participants will be expected to bring their own laptop computers. Computers will not be provided and access to computers is not included in the course fee.

A Certificate of Attendance will be issued to participants who have attended the entire course and completed all practical assignments during the course.

PROVISIONAL COURSE SCHEDULE AND CURRICULUM

Course meeting times are normally 09:00 to 16:30 daily

Date 2014	Component	Lecturer
DAY 1: **Monday** **17 March**	**Introduction** and course overview, expectations **Component 1**: Overview of air dispersion and types of models dispersion models ranging from street-scale traffic modelling to long-range trajectory models, but focuses on urban airshed modelling and the application of meso-scale models	Presenters to be announced 3.5 hours
	Component 2: Basic meteorology affecting dispersion of pollutants. **Practical 1**: Blowing smoke - computer laboratory. Essentials of air quality dispersion modelling.	Presenters to be announced 3.5 hours
DAY 2: **Tuesday** **18 March**	**Component 3**: Data preparation for dispersion modelling. A) Sources of air pollution and emission inventories – point, area and volume sources B) Preparation of meterological data sets. Surface and upper air windfields. C) Specification of source and receptor points. **Practical 2**: *Computer laboratory*: Operation of basic controls of the AERMOD model, using prepared data sets. Operation of model for hourly, daily and annual averages. Generation of concentration of contour overlays on background maps.	Presenters to be announced 3.5 hours
	Practical 2: - continuation. Explore effects of varying grid spacing. Rectangular and polar grids, single receptor points. Explore effects of stack height, stack temperature on putputs to illustrate use of dispersion model as a planning support tool. **Component 4:** Use of air dispersion models in preparation of applications for Air Emission Licenses – laws, regulations and guidelines in South Africa. Presentation of selected case studies of dispersion modeling results for licence applications.	Presenters to be announced 3.5 hours

DAY 3: **Wednesday 19 March**	**Component 5:** Limits and uncertainties associated with air dispersion models. Situations fro which AERMOD is appropriate or inapprpopriate. Alternate models for complex terrain or regional scale, multi-day modelling. **Practical 3**: Carry out a dispersion modelling assignment for use in support of an Air Emission Licence and prepare a brief report on the the model predictions.	Presenters to be announced 3.5 hours
	Component 6: Open discussion, question and asnswer session. Further self-initiated exploration of model features (Facilitators available for guidance). Discussions case studies and approaches for dispersion modelling situations suggested by participants Component 7: Course review and evaluation.	Presenters to be announced 3.5 hours