



# Training for CPT operators

The use of cone penetrating testing (CPT) as a valuable soil investigation tool for the geotechnical engineer is increasing in many European countries. The quality of the CPT has a major influence on the geotechnical design of a construction project. In Europe a new standard for CPT's is being introduced. This course was setup in cooperation with two leading manufacturers in the CPT industry and deals with the quality of performing CPT's.

## Aim of the course

This three-day course is intended for CPT operators with some experience in CPT testing. After completion of the course participants will be able to perform CPT's with porewater pressure measurement in accordance with international quality standards and recognize errors in the tests. Also, they will be able to interpret the CPT and understand the impact of the measurement on geotechnical design and thus ensuring the quality of the work.

Topics are:

- introduction to cone penetrating testing with electric or mechanical cones, including porewater pressure measurements (CPTU);
- introduction to soil mechanics;
- CPT simulation training;
- Dutch, Belgian, German, British and new European CPT standards;
- interpretation of CPT's and related geotechnical aspects;
- safety and environmental aspects.

The main part of the course consists of presentations with many practical examples and workshops. During the practical part of the course CPT's with porewater pressure measurements will be performed by the participants themselves using Deltares' tracktruck and crawler, both manufactured by A.P. van den Berg in Heerenveen.



### Excursion

During the course we will visit the factory of GeoMil Equipment in Alphen aan den Rijn. This manufacturer of CPT trucks, crawlers and measurement systems will show the latest technical developments.

### Course leader

Mario Weinberg is a geotechnical consultant at the unit Geo-Engineering of Deltares. He has more than 15 years experience in designing embankments for infrastructural and flood defense projects and more than 10 years experience in monitoring during construction of embankments. Currently he is chairman of the CROW committee 'Reële langsvlakheidseisen'.

### Procedure

The course consists of presentations, lectures, discussion sessions and workshops, all in English. Several companies will present their tools and equipment.

### Certificate

We provide a certificate of participation after completion of the course.

### Enrolment, fee and registration

The registration fee is € 1,450.-- for three days, excluding VAT.

In order to register for this course, please use the electronic registration form on our website [www.deltaresacademy.com](http://www.deltaresacademy.com).



### Course date

21 - 23 September 2010

### Location

Deltares, Stieltjesweg 2, 2628 CK Delft  
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# Deltares

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### Accommodation

Please check our website [www.deltaresacademy.com](http://www.deltaresacademy.com) for the special hotel arrangements.

### Transportation

From Schiphol Airport frequent train services operate to and from Delft (total travelling time approximately 45 minutes). Our website [www.deltaresacademy.com](http://www.deltaresacademy.com) provides more details on how to get to Deltares.

### More information

For more information, the course schedule, the list of instructors or any other question, please visit our website [www.deltaresacademy.com](http://www.deltaresacademy.com) or contact the course coordinator, Marion Arkesteijn (T +31 (0)88 335 7500 or e-mail [sales@deltaresacademy.com](mailto:sales@deltaresacademy.com)).

Deltares Academy is the training facility of Deltares.