

**WATER AND SANITATION ENGINEERING
FROM EMERGENCY TOWARDS DEVELOPMENT
April 18 to April 25, 2009**



Summary

The serious hygiene problems brought about by war or natural disasters have direct consequences on the health of large groups of people.

In recent years, the major international humanitarian organisations and most non-governmental organisations have set up specialised technical services to tackle these problems in the most appropriate manner. These services have come to rely more and more on engineers whose task it is to manage all aspects of projects dealing with water supply, environmental hygiene and sanitation.

The Centre of Hydrogeology of the University of Neuchâtel (CHYN) and the International Committee of the Red Cross (ICRC - Wathab Service) propose this course with the aim to enable the participants to acquire the basic technical skills required to conduct their activities as water and sanitation engineers (Watsan).

The course is proposed for the twelfth time. It will focus on the specific technology used in emergency work, on the implications of emergency actions in the medium- and long-term development of a population and on the role and responsibilities of the engineer within a humanitarian organisation. The speakers will provide ample time for discussion with the participants, whose active participation will be greatly appreciated. Instruction will essentially take the form of case studies based on real situations, practical demonstrations and simulations.

Objectives

The purpose of this course is to:

- train qualified and motivated engineers and scientists who might in their professional life encounter water and sanitation problems in situations of emergency and especially in humanitarian contexts;
- offer continuing education to professional staff from emergency and development organisations involved in water and sanitation;
- facilitate the integration of engineers and scientists in humanitarian operations;
- make the participants aware of public health issues and of the close links between public health, water and sanitation in disaster-stricken populations;
- provide information on technical skills and institutional solutions specific to emergency situations.

After the course the participants should be able to:

- identify, formulate and analyse the complex relations and the problems posed by public health, water and sanitation;

- pass on technical concepts and discuss them with health professionals as well as with industrial leaders, politicians, local and national administrators;
- assess the situation and plan, implement and monitor a water and sanitation emergency programme in the context of a humanitarian operation.
- better understand the institutional context of a humanitarian situation and design an emergency response, which involves long-term perspectives.

Participants

The course is designed for engineers and scientists interested in a humanitarian engagement in the domain of water and sanitation.

They must have a university or equivalent degree and be highly motivated. Prior experience in the domains of water supply, wastewater treatment, health and/or sanitation is welcome.

Organisation

The course is organised by the Centre of Hydrogeology (CHYN) and the International Committee of the Red Cross (ICRC).

Direction

Prof. François Zwahlen, Centre of Hydrogeology, Faculty of sciences, University of Neuchâtel.

Speakers

- Centre of Hydrogeology of the University of Neuchâtel (CHYN),
- International Committee of the Red Cross (ICRC – Wathab Service),
- Graduate Institute of Development Studies (IUED),
- Swiss Federal Institute for Environmental Science and Technology (EAWAG),
- Swiss Tropical Institute (STI),
- Swiss Centre for Development Cooperation and Technology Management (SKAT),
- OXFAM (Oxford, GB),
- Water, Engineering and Development Centre (WEDC, Loughborough University, GB),
- World Health Organization (WHO, Geneva)
- Other important international NGO's according to their availability,
(Possible modifications according to the availability of the speakers.)

Programme

The course consists of:

- Water, sanitation and public health: how to choose the most appropriate solution for a maximum positive impact on public health.
- Situation assessment and impact monitoring: how to plan and implement an intervention.
- Epidemiology of water related diseases: how to take effective preventive measures.
- Water supply: how to provide water in sufficient quantity and of acceptable quality in a rural or urban environment.
- Excreta, wastewater, solid waste and surface water drainage: how to reduce health risks by working on waste evacuation systems.
- Simulation of Watsan operations: how to analyse, plan and carry out operations.
- From emergency towards development: how to plan a possible later transition of the emergency operation into a development programme.
- Case studies of emergency operations.

Certification

The participants who have completed all requirements will receive a "Certificate of Participation" issued by the Continuing Education Department, CHYN and ICRC (Wathab Service). 4 ECTS (European Credit Transfer System) can be obtained by successfully passing a written exam.

General Information

Language

The course will mainly be held in English. Few interventions may be in French.

Dates and Duration

From April 18 to April 25, 2009: eight days with approximately 70 hours in total. The course will be held between 8:30 and 21:30. Two evenings are planned without courses from 18:30.

Place

The course will be held in Neuchâtel (Centre d'Hydrogéologie de l'Université de Neuchâtel, rue Emile-Argand 11, 2007-Neuchâtel).

Registration Fees

CHF 1,850.- for 8 days (8 lunches and 5 dinners included). The registration fees are due upon receipt of confirmation.

Accommodation

Accommodation is proposed to a preferential price of approx. 90.- CHF at the Hotel Touring au Lac upon early request. Any other accommodation can be chosen, but it is strongly recommended that all participants who do not live in the Neuchâtel region reserve a room in town, since some courses will finish late.

Insurance

The participants are not covered by any health insurance.

Application and Administrative Information

The number of participants is limited (minimum 15, maximum 20). If there are not enough registrations, the course may be cancelled or postponed.

Acceptance will be based on the applicant's profile, motivation and on a **first come first served basis**.

Selected candidates will receive final confirmation only after payment of the registration fee. Non-selected candidates will be placed on a waiting list and given priority for next years courses.

Applicants will be informed by end of February 2009 at the latest whether or not they have been accepted.

The detailed programme will be sent to successful applicants.

Complete [the attached application form](#) and return it with all the required documents to the following address by **February 20th 2009**:

Formation Continue, Université de Neuchâtel, Avenue du 1er- Mars 26, CH-2000 Neuchâtel

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Scientific Information

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