

## Certificate

Participants will receive a certificate of postgraduate in **Sustainable Hydropower** by Life Long Learning Academy Technikum Wien and ESHA, European Small Hydropower Association, Brussels

## Practical information

### Language

All lectures are held in English. All the lecture material and handouts are in English

### Duration

The course will start at 21 February 2011 and end at 23 April 2011

### Registration

Participants register with the director of the course Prof. Bernhard PELIKAN or at the Technikum-Wien homepage [www.lllacademy.at/hydropower](http://www.lllacademy.at/hydropower).

**It is possible to book the course by the week!**

## Fees

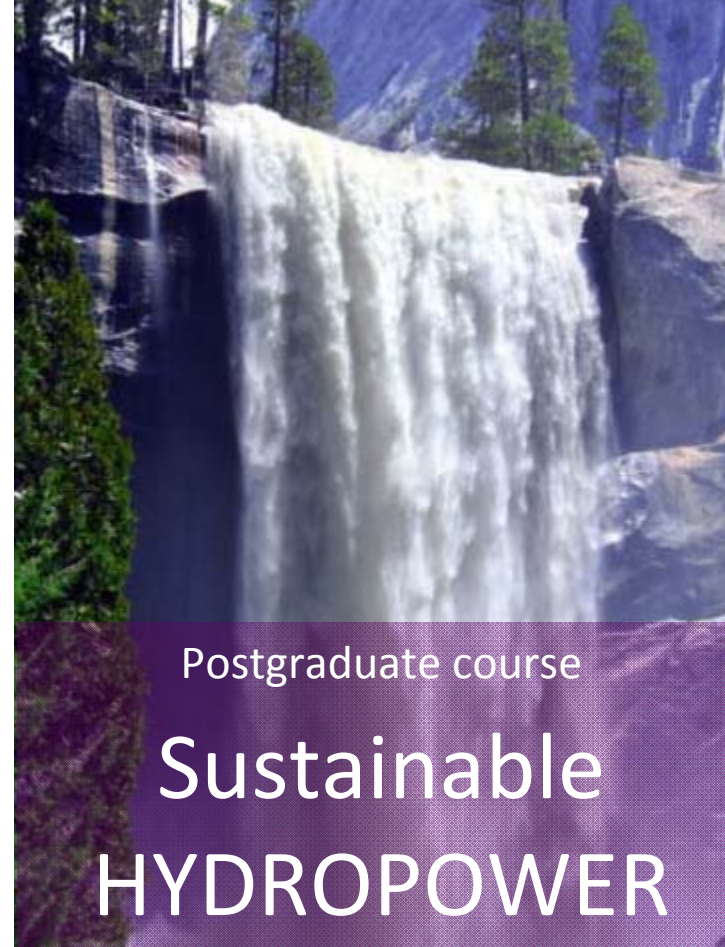
We are happy to offer the following very favourable fees of  
4400 €

If booking of individual course modules is desired, please visit our homepage for more details.

The number of participants is restricted.

Fees include tuition, study tours, lecture material on USB stick, welcome reception, closing dinner and use of all facilities of the location.

Fees are exempt of VAT.



Postgraduate course

# Sustainable HYDROPOWER

Sponsors

**ANDRITZ**  
Hydro

**BRANDL & TALOS**  
RECHTSANWÄLTE · ATTORNEYS AT LAW

A course about clean and sustainable energy generation  
with the most important element on earth, **water**

## Organisers

Life Long Learning Academy Technikum Wien,  
Prof. Bernhard Pelikan  
ESHA, European Small Hydropower Association.



## Invitation

Hydropower is the backbone of renewable energy. Although traditional there is still a huge development in both design and technology. The continuously increasing economical, environmental and social challenges result in an increasing demand of specialists not only in Europe but all over the world. To become a specialist in **Sustainable Hydropower** means to acquire the ability of interdisciplinary engineering and the feeling of how to find compromises. Although there already exists some sectoral education in hydropower-related topics like hydrology or turbine technology at different European universities, there is still no comprehensive education offered focusing exclusively on **Sustainable Hydropower**.

## Objectives

The course **Sustainable Hydropower** is designed to equip the participants with the competence to understand the state of the art on hydropower design and technology. The course aims to improve the understanding of concepts and systems and enhance knowledge regarding tools and approaches. The course will educate those involved in design, engineering and implementation of advanced and sustainable hydropower concepts.

## Target group

**Sustainable Hydropower** is tailored to professionals in the hydro power business, to potential investors who want to learn about the background of their business and generally to people who are interested in one of the most colourful sectors of renewable energy.

## Programme

**Sustainable Hydropower** is a 9-week course

**W1: Hydrology and Hydromechanics**

**W2: Hydromechanics and low head design works**

**W3: High head design works and tunnel construction**

**W4: Dams, reservoir management, turbine design**

**W5: Ecology, wetlands and lessons learned**

**W6: Electrical equipment, ocean energy, „zero head“- turbines**

**W7: Renewable energy sources, solving conflicts, HP policy**

**W8: Practical group work on design and engineering**

**W9: Exams and final study tour**

## Location

The lectures will be held at Technikum Wien in Vienna, Austria in an excellently equipped seminar room close to the city centre.

Free internet access, coffee, tea and water are available during the entire duration of the course. Participants may stay in the location also outside lectures times for studying, internal discussion and group work.

## More information?

[www.esha.be](http://www.esha.be)

[www.llacademy.at/hydropower](http://www.llacademy.at/hydropower)

Prof. Bernhard PELIKAN, [pelikan@boku.ac.at](mailto:pelikan@boku.ac.at)