

## AQUAEXCEL TRAINING COURSES SERIES

**Date:** 22-25 April 2013

**Location:** Wageningen University, the Netherlands

### COURSE OUTLINE

#### TITLE

Recirculating Aquaculture System (RAS) Technology

#### COURSE DESCRIPTION

In this training, experts in the field of RAS will review the newest principles, concepts and operation of conventional and 'ecosystem approach'-based RAS. RAS already has an extremely-environmentally friendly image, but this can be further improved by minimising the ecological impact of fish farming by closing the system where possible in terms of water and nutrients.

The objective of this training is to examine and convey the aspects of recirculation technology that is of importance to research, design and management, and operation. Additionally, the course will evaluate new innovative and existing farm installations.

This course places emphasis on the provision of opportunities for gaining hands-on experience in design, evaluation and operation of recirculation systems. Aspects of farm management and routine-based operations at fish farms using recirculation systems will also be addressed. Training will be provided using a combination of a distance learning element, integration of the developed infrastructure for RAS, traditional lectures, innovative practical training, and field trips.

#### COURSE CONTENT

- Recirculating Aquaculture System (RAS)
- Aspects of recirculation technology relevant to research
- Design and management of RAS
- Operation and evaluation of RAS
- Closing systems
- Minimising water and nutrient use

#### COURSE ORGANISERS

Aquaculture and Fisheries Group, Wageningen University (the Netherlands), with the expertise of NOFIMA, IFREMER, IMARES, Technical University of Denmark and the University of California.

#### TARGET AUDIENCE

Individuals with (basic) knowledge of recirculation technology and an interest in its design or operational use

#### LOCATION:

De Elst 1, 6708 WD Wageningen, the Netherlands  
<http://www.wageningenur.nl/en/Expertise-Services/Chair-groups/Animal-Sciences/Aquaculture-and-Fisheries.htm>

#### TIME:

**4 day course, including an evening programme on 2 of the 4 days**

#### REGISTRATION:

Visit [www.aquaexcel.eu](http://www.aquaexcel.eu) for online registration. Participants are requested to submit their CV and a brief description of motivation for attending the course. Places will be confirmed at latest one month before commencement of the training course. Admittance to the course will be confirmed officially. Please do not make travel arrangements unless you have received official confirmation.

#### COURSE 1

**Title:** Recirculating Aquaculture System (RAS) Technology  
**Course Provider:** Aquaculture and Fisheries Group, Wageningen University (the Netherlands), with the expertise of NOFIMA, IFREMER and IMARES  
**Location:** Wageningen University, the Netherlands  
**Date:** 22-25 April 2013

#### COURSE 2

**Title:** Applications of Genomic Information to Selective Breeding in Aquaculture of Temperate and Mediterranean Fish  
**Course Provider:** INRA  
**Location:** Jouy-en-Josas, France  
**Date:** Summer 2013

#### COURSE 3

**Title:** Chromosome Set Manipulations and the Importance of Gamete Collection and Management, including Sperm Cryopreservation  
**Course Provider:** Institute of Aquaculture, University of Stirling  
**Location:** Stirling, UK  
**Date:** Summer 2013

#### COURSE 4

**Title:** Efficient Design of Fish Larval Experiments Utilising New Monitoring and Control Systems  
**Course Provider:** NTNU and SINTEF Sealab  
**Location:** University of Science and Technology (NTNU), Trondheim, Norway  
**Date:** April 2014

## FEES

Course attendance is **free**, thanks to EC FP7 funding. Participants are expected to pay their own travel, subsistence and accommodation

## MAXIMUM PARTICIPANTS

25 people, CV and description of motivation for wanting to attend course may be used as selection criteria

## LANGUAGE OF INSTRUCTION AND MATERIAL

English

## COURSE TUTORS



### Ep Eding - Wageningen University:

Teacher and course coordination

<http://www.wageningenur.nl/en/Expertise-Services/Chair-groups/Animal-Sciences/Aquaculture-and-Fisheries.htm>



### Geertje Schlaman - Wageningen University:

Course coordination

<http://www.wageningenur.nl/en/Expertise-Services/Chair-groups/Animal-Sciences/Aquaculture-and-Fisheries.htm>



### Marc Verdegem - Wageningen University

<http://www.wageningenur.nl/en/Expertise-Services/Chair-groups/Animal-Sciences/Aquaculture-and-Fisheries.htm>



### Per Bovbjerg Pedersen - Technical University of Denmark

<http://www.aqua.dtu.dk/English/Service/Phonebook.aspx?lg=showcommon&id=39745&type=cv>



### Raul H. Piedrahita - University of California

<http://bae.engineering.ucdavis.edu/>



### Bendik F. Terjesen - Nofima

<http://www.nofima.no/en/person/bendik.terjesen>



### Andries Kamstra - IMARES

<http://www.wageningenur.nl/nl/Expertises-Dienstverlening/Onderzoeksinstituten/imares.htm>



### Edward Schram - IMARES

<http://www.wageningenur.nl/nl/Expertises-Dienstverlening/Onderzoeksinstituten/imares.htm>



### Jean-Paul Blancheton - Ifremer

<http://annuaire.ifremer.fr/cv/15796/>