

IOC Training Course and Certification on Identification of Harmful Marine Microalgae May – August 2020

Overview

Since 1993 the IOC has conducted training courses on harmful microalgae. The purpose has been to improve the taxonomic and identification skills of the participants for research purposes and for practical monitoring of harmful algal blooms. From 2006 the IOC training in HAB identification has been offered within a new framework which gives accreditation. The present course includes now a practical exam at the end of the course with an IOC Certificate of Proficiency in Identification of Harmful Algae issued to participants who pass the exam.

The course includes 100 hours of teaching and is divided into two parts. 1) The first part of the course is an internet teaching programme giving general introductions to the various groups of harmful algae; this part is mainly for self-study and estimated to 40 hours of reading. 2) The second part is a practical course in species identification including 2 optional workshops in enumeration and culture techniques. It may be possible to participate in both workshops, or alternatively spend the time examining mixed samples from various geographical regions and/or own samples. Part 2 includes 60 hours of teaching and a microscope will be available to each participant during the entire period.

Learning Outcomes

Participants will be acquainted with current sampling techniques utilized in HAB processing and will be able to identify HAB species

Course Topics

- Biology of harmful algae
- Molecular methods and phylogenetic analysis
- Microscopy and sampling techniques
- Species identification (main groups):
 - Haptophyceae
 - Raphidophyceae
 - Dinophyceae
 - Bacillariophyceae
 - Cyanobacteria
- Optional workshops:
 - Enumeration techniques
 - Culture techniques

Target Audience

The course is aimed at participants who have some years of practical experience in identification of microalgae. The number of participants is limited to 16. If there are more applicants than available seats, priority will be given to applicants who have direct research or management responsibilities with regard to the occurrence of harmful algae. NOTE: UNESCO is committed to promote gender equality. Therefore, applications from women are strongly encouraged.

Course Pre-requisites

- Working knowledge of English
- Participants are expected to bring own samples

For more detailed information, including registration fees and detailed programme, please check:

- <https://www.oceanexpert.net/event/2581>

A Certificate of Proficiency will be issued to all participants who score at least 70% on the final exam.

Course dates:

- Online (e-learning): May – July 2020
- Face to face workshop: 2 – 15 August 2020

Duration:

- Online (e-learning): estimated 40 hours workload (reading and online quizzes)
- Face to face workshop: 11 working days (~60 hours)

Venue:

IOC Science and Communication
Centre on Harmful Algae,
University of Copenhagen,
Universitetsparken 4, DK-2100
Copenhagen Ø., Denmark

Lecturers:

- Dr. Heléne Annadotter
- Dr. Santiago Fraga
- Dr. Jacob Larsen
- Dr. Nina Lundholm
- Professor Øyvind Moestrup

Period for Applications:

12 December 2019 – 1 April 2020

Application process:

Please fill the **online application form**:
<https://bit.ly/36pkLfk>

In case of questions contact:

- Jacob Larsen, jacobl@bio.ku.dk or
- loc.training@unesco.org

Always using the name of the course as email subject.

Useful sites:

- www.ioc-cd.org
- <http://hab.ioc-unesco.org>
- www.oceanteacher.org
- www.oceanexpert.org