EUROFLEETS TRAINING CALL OPEN

Oceanographic Ship-based Training Course for Postgraduate and Graduate Students of Marine Sciences

Split, Croatia, 16th – 27th June 2015

General objectives of the course

The course offers an introduction to practical aspects of multidisciplinary oceanographic research at sea, education of students in oceanographic sampling and data analysis related to marine physics, chemistry, biology and fisheries. The course will be carried out on board R/V BIOS DVA and will include a field campaign in the open and coastal central and south Adriatic Sea. More information about R/V BIOS DVA is posted at http://www.izor.hr/web/guest/flota_bios-dva and http://www.rvinfobase.eurocean.org/spec/vessel.jsp?id=5300.


**Learning objectives**

Students participating in this course will learn about:

1. Planning and preparation of oceanographic cruises by research vessels, including preparation of CSR Report
2. Measuring of physical properties of the seawater by a CTDO multiparameter probe, including optical sensors
3. On-board real-time assessment of ocean dynamics (meteorological parameters, ocean currents profile)
4. Sampling and on-board analysis of selected chemical parameters
5. Sampling, species identification and phytoplankton analyses
6. Measuring of chlorophyll a
7. Measuring of primary production, species identification and counting of microzooplankton and mezozooplankton
8. Studying benthic communities by analysing video frames from camera on ROV
9. Identification, sampling and data recording of pelagic and mesopelagic fishes by echo-sounding and a trawl net
10. Use ODV and DIVA software for processing and presenting oceanographic data and wireless link for CSR update in IOF web-oriented database and presentation on the Internet.
11. Integration and interpretation of collected oceanographic data and discussion of obtained results.
12. Assessing the data collected during the cruise versus regional oceanographic phenomena.

**Course content**

The course is composed of a combination of lectures, laboratory work and practical sampling/measurements, and interpretation of oceanographic data. Before the on-board activities the participants will spend an introductory day at IOF in Split (Croatia) with lectures covering the background for planned sampling of each discipline, a description of the activities that will be carried out on-board, design and planning of the cruise and practical issues. Special attention will be paid to the oceanography of the Adriatic Sea.

Afterwards, the participants and lecturers will be embarked on R/V BIOS DVA and proceed to cruise in the central and southern part of the Adriatic Sea. The cruise will be split into two parts:

1. First part of the cruise will be devoted to oceanography (physical, chemical and biological parameters) and sedimentology.
2. Second part will be devoted to marine benthic biology and fisheries.

The students will work on-board in two teams and rotate between topics to learn and do practical work on each topic.

Physical oceanography will cover marine meteorology, physical properties of the sea, including optics and marine dynamics.

Chemical oceanography will cover: basic chemical seawater properties, including nutrients and sedimentology.

Biological oceanography will cover sampling and analysis of phytoplankton and zooplankton, measurements of primary production and chlorophyll a, sampling and
analysis of phytobenthos and zoobenthos, and assessment of benthic community status by video camera.

Fishery will cover: locating and analysing pelagic fish by echo-sounding subsequently processed by specially developed software and sampling by trawl net, including data analysis on board.

Analysis and interpretation of the measurements and data collected during the cruise will begin on-board and continue in the days after the cruise at the Institute. Discussion meetings on daily activities will be held in evening hours of each day during the cruise.

The course will end with seminar presentations prepared by the participants, covering the performed activities and obtained results during the cruise and the course.

Course schedule

The course will be organized in the period from 16\(^{\text{th}}\) June to 27\(^{\text{th}}\) June 2015 in the central and south part of the Adriatic Sea:

Participants are expected to arrive on Monday, 15\(^{\text{th}}\) June 2015, to Split:

- 15\(^{\text{th}}\) June – Arrival in Split (lodging on the R/V BIOS DVA)
- 16\(^{\text{th}}\) June: Introductory lectures and cruise planning at the Institute
- 17\(^{\text{rd}}\) – 19\(^{\text{th}}\) June: Cruise along two transects (Palagruža Sill & Jabuka Pit) in the central part of the Adriatic Sea
- 20\(^{\text{th}}\) - 22\(^{\text{nd}}\) June: Cruise in the south part of the Adriatic Sea (South Adriatic Pit)
- 23\(^{\text{rd}}\) - 25\(^{\text{th}}\) June: Cruise in the coastal area of the Croatian Adriatic Sea (route Dubrovnik – Korcula – Hvar – Split)
- 26\(^{\text{th}}\) June: Data work-up and preparation of seminars
- 27\(^{\text{th}}\) June: Presentation of seminars and their evaluation
- 28\(^{\text{th}}\) June: Departure
Lecturers

- Professor Vlado Dadic (IOF, Croatia), course coordinator
- Senior scientist Ivica Vilibić (IOF, Croatia)
- Professor Branka Grbec (IOF, Croatia)
- Scientist Slavica Matijević (IOF, Croatia)
- Professor Živana Ninčević (IOF, Croatia)
- Professor Olja Vidjak (IOF, Croatia)
- Professor Vjekoslav Tičina (IOF, Croatia)

Application

A total of 12 positions are available for European graduate and postgraduate students (students of all nationalities enrolled at the European universities) and the selection will be based on the information provided in the Application form:

Http://baltazar.izor.hr/roskop/online_reg_eurofleet

Deadline for submitting Application form is 8th February 2015. Successful applicants will be notified by 19th February 2015.

In case of any additional questions, please email Vlado Dadić (dadic@izor.hr).

The course is funded by EU FP7 project EUROFLEETS2 (www.eurofleets.eu). All travel and accommodation expenses are funded by the project.

Course organizer: Institute of Oceanography and Fisheries, Šetalište Ivana Meštrovića 63, 21000 Split, Croatia, Http://www.izor.hr