EUROFLEETS Floating University on board R/V Dana

“Oceanography at sea: An introduction to practical aspects of oceanography”

Copenhagen, Denmark 20\textsuperscript{th} May – 3\textsuperscript{rd} June 2015

\textbf{General course objectives}
Modern ocean science is truly multidisciplinary representing an overlap between biology, chemistry, geology and physics. This course offers an introduction to practical aspects of oceanographic research at sea, providing students experience with oceanographic sampling and data analysis. The course will be carried out on board R/V Dana during a cruise from Tromsø, Norway to Hirtshals, Denmark.

\textbf{Learning objectives}
Students participating in this course will learn to:

- Identify common pitfalls and necessities with organizing oceanographic sampling.
- Use a conductivity-temperature-depth (CTD) probe for measuring the physical properties of seawater.
- Conduct sampling for surface sediments using a coring system.
- Quantify phytoplankton biomass distribution using chlorophyll a measurements and assess phytoplankton productivity/diversity.
- Conduct measurements of selected chemical properties of seawater.
- Identification, sampling and data recording of pelagic and mesopelagic fishes from a midwater trawl
- Use OceanDataView software for processing and presenting oceanographic data.
- Integrate and interpret the oceanographic data collected.
- Relate the data collected during the cruise to regional oceanographic phenomena.

The course will be credited as a 5 ECTS through the Technical University of Denmark, MSc programme in Aquatic Science and Technology.
**Course content**

The course is composed of a combination of lectures, laboratory work and practical sampling/measurements, and interpretation of oceanographic data. Before the cruise you will attend an introductory day in Copenhagen with lectures covering the background to the planned sampling of each discipline, a description of what will be carried out on board, survey design & planning, and practical issues. We will then travel to Tromsø together and board RV Dana. On board students will work in teams and rotate between sampling themes (biology, chemistry, geology and physics) so that once the cruise is finished students have tried each theme. In addition pelagic fish trawls will be carried out. In the evenings lectures will be given on the oceanography of the region. Analysis and interpretation of the measurements made and data collected will begin on board and continue in the days directly after the cruise after travel back to Copenhagen. The course will end with a poster presentation based on the data collected.

**Time plan**

The course will be from the **20th May to 3rd June 2015**.

Participants are expected to arrive on Wednesday 20 May 2015 in Copenhagen.  
21st & 22nd May: Introductory lectures and cruise planning.  
23rd May: Travel to Tromsø and board R/V Dana.  
24th May: Sail from Tromsø.  
29th May: Arrive in Hirtshals, Denmark and travel back to Copenhagen.  
30th May-1st June: Data work up and poster creation.  
2nd June: Poster session and evaluation.  
3rd June: Depart.

**Teachers**

Associate Professor Colin A. Stedmon (DTU, Denmark), Course Coordinator  
Professor André Visser (DTU, Denmark)  
Senior Scientist Andrea Caburlotto (OGS, Italy)  
Pauhla McGrane (GMIT, Ireland)  
John Boyd. (GMIT, Ireland)

**Applications**

A total of 18 positions are available for European graduate students (students of all nationalities enrolled at European universities) and the selection will be based on the information provided in the application form (https://smartseaschool.wufoo.com/forms/eurofleets-rv-dana-floating-university). Application deadline **1st December 2014**. Successful applicants will be notified by 31st December 2014. If you have additional questions email Colin Stedmon (cost@aqua.dtu.dk).

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