

BIO414 Coastal Pelagic Ecology

- **Credits – Semester – Duration – Location**

The course work represents 10 ECTS. The course runs in the spring semester every year, in April-May. The course is arranged at Campus Kristiansand.

- **Study Programme**

The course is a part of the master program in coastal ecology.

- **Language of teaching**

The course will be taught in English.

- **Prerequisites**

Admission to the course is given on the same prerequisites as admission to the master program (<https://www.uia.no/en/studies/how-to-apply-to-degree-programmes/supplementary-regulations-regarding-admission-to-master-s-programmes/admission-requirements-for-the-coastal-ecology-master-s-programme>) and includes either an integrated program of at least two years in biology/ecology or a major subject of at least 80 credits within biology/ecology. The minimum grade requirement is a weighted, average grade of C or better.

- **Recommended previous knowledge**

There is no recommended previous knowledge in addition to the admission requirements.

- **Learning outcomes**

Upon completing the course, the students will

- understand the ecological interactions characteristic of the pelagic realm of the North Atlantic and be able to describe the dominant organisms of this system
- be able to discuss how physical and chemical drivers affect the ecosystem over time and space
- be able to compare pelagic ecosystems of different biogeographic regions
- have acquired knowledge of the diversity of fish life forms, and how these relate to the spatial and temporal dynamics of fish populations
- use reasoning to address ecological aspects of fish population dynamics, particularly during early life history stages
- be able to identify dominant pelagic organisms along the Agder coastline
- be able to formulate hypotheses and design studies to investigate questions related to pelagic ecology
- be able to write pertinent research proposals addressing ecological aspects plankton and fish population dynamics in relation to environmental variability
- have gained essential knowledge to design and perform marine sample surveys on pelagic marine communities to address scientific questions of pelagic ecology
- have acquired practical skills to collect, store and process marine organisms for downstream analyses

- **Contents**

The course provides a thorough introduction to temperate coastal marine pelagic ecosystems. The course will give more specialized insights into organisms and ecological interactions of the pelagic realm of the North Atlantic focusing on the Skagerrak/North Sea regions. Mechanisms affecting abundance, seasonality and distribution of plankton and nekton in relation to the variability of oceanographic parameters will be discussed. Factors affecting survival, dispersal and distribution of fish during early life history stages will be detailed in relation to environmental variation and human activities.

- **Teaching and learning methods**

The course will use a combination of lectures, seminars, field work, laboratory work and group project work. The course will start with lectures and seminars/discussions to introduce students to relevant topics including the field project. 3-5 days will be spent in the field to sample material and data for student projects.

Total lecture hours: 35 hours

Laboratory/seminars: 45 hours

Field excursion: 3-5 days

- **Examination requirements**

Compulsory learning activities include field excursions and laboratory work.

- **Examinations**

The evaluation for the course will be based on an individually written research proposal (40%), a 2-hr multiple choice exam (30%) and a field report prepared as group work (30%). For the group report, the group as a whole is graded. The course is graded by letters (A-F).

- **Student evaluation**

The course runs over 6 weeks and will have an end of course evaluation.

- **Offered as a free-standing course**

Yes, if there are places available.

- **Open to external candidates**

No

- **Assessment methods for external candidates**

N/A

- **ECTS credit reductions**

Credit reduction of 5 ECTS with UiA course BIO404-1.

- **Responsible faculty**

Faculty of Engineering and Science