

Havet, 7.5 hp
Fall Term, 2018
Department of Geological Sciences
Stockholm University
Thursday, 18.00 – 20.30

Instructor:

Dr. Eve Arnold

Course organizer

Course content

This course is designed to present an overview of ocean sciences. The course is targeted towards non-scientists, and will provide 7.5 points of university course credit. There are no specific course prerequisites.

The course is broadly divided into 4 sub-topics; geology, chemistry, physics and biology of the Earth's oceans. The Baltic Sea environment, especially the geological history of the Baltic, will be a theme highlighted by the field trip.

If you have taken, or plan to take, Oceanografins Grunder in the meteorology department, note that you are not able to use both courses for points towards your degree, since they are both introductory oceanography courses and there is substantial overlap between the courses.

Goals of the course

The student will leave the course knowing the major chemical, geological, biological and physical processes active in the oceans. The student will also have learned about the scientific method, how oceanographers work, and a little bit about the current research being conducted in these fields. Students should also be able to critically assess the scientific methods used to make policy decisions, which affect our lives outside of the classroom.

Organization of the course

The course will be presented in one, 2.5-hour period each week. In an effort to assist learning, there may occasionally be a break within the lecture. During this time, students will either be assigned a task to be completed out of class or asked to answer a basic question, summarize the main points of the lecture, or perform a simple calculation. This allows us to see whether you understand the material, and will provide you with a well-organized study guide for exam preparation. You may use your textbook, notes and neighbors for these exercises - they are not exams!

Reading the text and other assigned materials will be important for your success in this class. If you read the assigned material before the lecture, you will get a lot more out of the class, since reading improves listening skills.

This course is taught in English; this applies to both lectures and reading material. Students are free to submit any material they write (papers, field trip reports, exams) in either Swedish or English, as they wish.

Expectations and evaluation

This is an evening course, which is open to both the general public and university students. We cover the same content as a university level course, but we proceed at a slower pace than the normal schedule. While many courses determine a student's final grade based on only a single final exam, we will assess your progress in understanding how the ocean works in two different ways.

Task 1: Final exam. Here is a traditional in-class final exam, which will include questions from all of the material we have covered in the course. The goal here is for you to use your new skills to explain and interpret various fundamental processes in the ocean. The exam will consist of any combination of multiple choice, short answer, essay, matching and fill-in-the-blank questions. You are responsible for all materials from the lecture, readings and assignments. You will receive practice questions prior to the exam.

Task 2: Field trip report. Here we ask you to make some observations of marine sediments, based on samples collected during a class field trip to Askö. You will receive specific instructions as to what to observe and how to interpret the results, via a field trip guide, which you will receive prior to the field trip. You will work with other students and instructors during the data collection, but each student must turn in an individual report. The goal here is for you to learn something about the Baltic Sea history, the scientific method and how oceanographers work in the real world.

Each of these tasks will be explained in detail, and the evaluation procedures for each task will be further clarified in class. If you miss the class where these explanations are given you can contact Eve Arnold to get the information.

Your final grade in the course will be based on all 2 of these tasks, weighted as follows:

Final exam (November 29)	75%
Field Trip Report (December 13, email or post)	25%
Total	100%

You must achieve a grade of E or better for each of the 2 tasks in order to receive a final grade.

Your final course grade will be assigned based on the following scale:

A ≥ 90%, B 80-89%, C 70-79%, D 60-69%, E 50-59%, Fx 40-49%, F < 40%

Student Evaluation of Teaching

You will have the opportunity to evaluate us. This information is important for us to continually improve the course content and delivery. You will receive a course evaluation form by email. We would like you to fill in the course evaluation form at home and turn it in at the final exam.

Required materials

The required text for the course is: Essentials of Oceanography, Pearson New International Edition, 11th Edition, Alan Trujillo, Harold Thurman, 2013, Paperback, ISBN-13 978-1-292-04100-1. BE SURE TO BUY THE INTERNATIONAL EDITION, it is much cheaper.

It is fine to use one of the earlier (8th to 10th) editions of the textbook. We have structured most of the lectures to follow the text, but we will present some additional illustrations of principles, which are not covered in the text, and some specific studies from the Baltic Sea. We will not review every page of assigned reading in lecture. However, you are responsible for all assigned reading and lecture material on the exams.

In addition to the textbook, assignments may occasionally include other reading as well as discussing articles on current oceanographic topics from other sources (newspapers, magazines or journals). Copies of these materials will be provided to you.

Course policies

While not obligatory, your attendance in lecture will truly improve your chances of success in the class. If possible, please let us know about any extended absences ahead of time.

Attendance during the field trip is required. If you cannot attend the field trip due to other obligations, you will need to perform an alternative activity in the lab at SU after the field trip. More information about this will be provided to you prior to the field trip.

Instructor contact information

Eve Arnold

Office: R225

Phone: 674 75 98

Email: emarnold@geo.su.se

Office hours: Mondays, 16.30 – 19.00 or by appointment

If you are unable to attend regularly scheduled office hours, you may see the instructor after lecture or call to schedule an appointment for another time. You may also ask your question via e-mail. Please do not drop by the instructor's office during the hour preceding lecture. I use this time to review my notes and materials and will be unavailable to assist you during this time.

If you are having difficulty with this course, I strongly recommend that you come to my office hours and discuss it. Most difficulties can be resolved with a few short meetings between the instructor and the student. We are here to help!

Course outline

The course schedule presents the topics and scheduled activities for the term. Significant departures from this schedule will be updated on TimeEdit and a written handout in class.