Invitation to Uppsala University Summer Science Camp

Summary

Since 2002, our research school has been held at the Erken Lab field station. Each year, we admitted 12-20 students in the age of 16-19. Some of the students have been recruited from Sweden and some from Estonia, Lithuania, Latvia, Finland, Poland, Belarus, Russia and Ukraine.

The summer of 2022 we will arrange the course for 12 students from schools all over Sweden.

The Science Camp consists of lectures, practical exercises and study visits, but the most important thing is the 100 hour-long research project. You will learn how to work scientifically and cooperate by performing the projects in pairs, supervised by researchers or PhDs from Uppsala University, SITES or a partner university. The project is presented as a written report, a poster and an oral presentation by the end of the research school – all of which can be presented at your home school or admitted to a science fair competition!

Schedule in short

First week
Lectures: Introduction to the science camp and special lectures about science and research in more general terms. There will also be introductions to field methods. Finally we will also go through how to write and present scientific projects.
Project: During the first week the students start reading about the projects, which is conducted in pairs. The students will also make their own research plan for the following weeks, with assistance from the supervisors.
Social activities: The first evening there will be a welcome dinner and teamwork activities.

Second week
Lectures: Supervisors will have lectures on a topic of interest or their scientific career.
Project: During this week most of the work on the projects is conducted. By using the best field methods, introduced by the supervisors during the first week, you will learn how to manage your field sampling, collect data, work with the data and do the major part of writing.
Social activities: There will be evening activities as well as a field trip.

Third week
Projects

Before the research school starts or at the start we will supply a list of different projects that the students can choose from. We also encourage the students to come up with their own projects (please contact us in advance!).

Example of a project from previous years:

**The diversity of phytoplankton - How many species are there in the water?**

This study is pertaining to the morphological classification of freshwater phytoplankton, which could be used to assess the water quality.

Phytoplankton constitutes the main group of primary producer in the aquatic environment. Due to the reason that phytoplankton community could keep track of the environmental changes, for example, light, temperature, nutrient availability and grazing pressure from zooplankton. They are classified into groups by the type of pigments which are used to perform photosynthesis. The diversity of phytoplankton in the lake could be used as the indicator for the water quality for the reason that certain species have its optimal conditions to grow and live.

Firstly, we will go out to get phytoplankton samples from the lake water. Then in the laboratory, the method using in this project is Utermöhl technique, the basic procedure for counting algae is to fill a counting chamber with preserved sample, which is fixed using lugol’s solution, after a period of settling, identify and count the cells under the inverted light microscope simultaneously.
Terms of the Uppsala University Summer Science Camp 2022

The application procedure is now open for school students from Sweden. The students should be between 16 and 18 years old, and have a background and interest in science. All applicants MUST be able to speak, read and write English, as most teaching will be conducted in English!

The Research School will be given from 2022-06-13 to 2022-07-01. The students will stay in shared rooms close to the Erken Laboratory. Bathrooms with showers are shared in the house (gender separated).

Applications are individual and have to include:

- Name, birth date, gender, mail-address, telephone number and educational level

- A short (1/2-1 page) personal letter including details about education, future plans, hobbies etc.

- A letter of recommendation from a schoolteacher, including confirmation of capability in English.

Please mark your application(s) “Uppsala University Summer Science Camp 2022” and send it before 2022-04-15 in electronic form to pia.larsson@ebc.uu.se.

Participation in all activities, food and lodging at Erken Laboratory will be free of charge. The following need to be financed by the student (or applied for from another source)

- Travelling to and home from the course

  Note: the closest airport is Arlanda (80km) and the nearest train station is in Uppsala or Stockholm. If you are accepted to the course, you will receive more information on how, where and when to book your tickets. We will arrange that you are picked up on arrival and take you to the Erken Laboratory.

- Insurance

We wish you all very welcome to apply to the Erken Laboratory Research School 2022. If you have any questions, please don’t hesitate to contact Pia.

Staff at the Research School

Course leader: Pia Larsson, MSc in education

Course assistant: Jonas Beretta-Piccoli