

# Erasmus Stockholm University 'Fall semester 2013'

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## Swedish educational system

The Swedish educational system has the same semester structure as we have in Belgium. Though the examination period at the end is non-existing. In Sweden, courses are given full-time for one month (usually a course of one month for 7.5 ECTS – 4 courses a semester) or two months (for the 15 ECTS courses). At the end of a course, there is an exam or an assessment based on a written (or several written) report(s). As for me, three courses were followed, equivalent to 30 ECTS: polar and alpine environments (15 ECTS), permafrost: interactions with ecology and hydrology (7.5 ECTS) and Quaternary climate history (7.5 ECTS).

## Polar and Alpine Environments – 15 ECTS

The course starts with an excursion to northern Fennoscandia. There are two possibilities: a round trip around the north of Fennoscandia (our case) or an excursion near Kebnekaise. We had the first option, started our excursion in Kiruna and drove for 2700 km to arrive 10 days later - passing north of Sweden, Finland (up to the Russian border), Norway, Finland, Norway - back in Kiruna. The goal of this excursion was to study the past and present environments and landscapes of northern boreal and subarctic Fennoscandia, with a special emphasis on the latitudinal and altitudinal variations in vegetation.

One day break after the northern Fennoscandia excursion and off we went again to central Sweden: excursion Värmland. This excursion was less exciting from the landscape point of view, but the way of teaching was way better here. We tried to find out the history of the (glacially formed) landscape ourselves, with making hypotheses and landscape sketches, while in Fennoscandia explanations were pretty scarce and brief. On both excursions, we had one day of coring into peat layers and sediments (the more practical work).

The second part of the course consisted of lectures in a wide range of topics (ice cores, Arctic Ocean bathymetry, political conflicts in the Arctic, tropical alpine environments, ...), to make us familiar with the master program in glaciology and polar environments. In these lectures, presence was obligated, though the content or the knowledge we captured was never asked on an examination. The grading was completely based on two written reports: one about an excursion-related topic and an additional one on the range of topics considered as 'polar and alpine environments'. It was interesting to choose topics in your own field of interest, which is a positive aspect of this course (in addition to the beauty of northern Fennoscandia), but honestly, it was not worth the 15 credits.

## Permafrost: interactions with ecology and hydrology – 7.5 ECTS

The permafrost course (given for the first time) consisted of four different modules, each lasting for one week. The first module was about the global carbon inventory. The second was more practical with exercises on ArcGIS-based mapping. The third module had its focus on hydrology modelling while the last part of the course dealt with ecosystem modelling. This course was rather heavy with regard to work load. Each week we had to prepare a seminar (read several articles and discuss them in group – graded) and write reports on hydrology modelling and GIS based permafrost-and carbon

inventories. Definitely, it was the best course because of the things we learned, but for sure the most work too.

### **Quaternary climate history – 7.5 ECTS**

The course started just before Christmas break. This Christmas break lasted for just more than two weeks. Two seminars took place before the break. The task for these seminars was to read several papers and discuss them in class (the seminars were graded). After the Christmas break we had an interesting visit to the national-historical museum and finally we submitted and presented a paper regarding a chosen topic on quaternary climate history. In general, the course had very few lectures and studying time was very limited. There was some work for the final report and the seminars, but the lack of exam made the few lectures rather useless.

### **Swedish language course**

Stockholm University offers the possibility to take a course in Swedish for all foreign students. If the home university permits, it is even possible to get credits for this (first level course – 4.5 ECTS). I didn't manage however to make time for this course (evening course) and decided not to participate for the examination.