**CHEM-E5140 Materials Characterization, laboratory course (5 cr.)**

**Instruction for oral exam**

The idea of the oral exam is not to memorize small details but instead to understand the big concept. In the exam there will be 3 students at the same time. You will be given different tasks in the beginning and you have some time to gather your thoughts. There will be paper available in the exam (just bring a pen).

There are two separated parts:

1. **The method**

All the methods described at the class will be put to small notes and placed to a doctoral hat. When you come in to the exam, you will take one method. You get short time to summarize your thoughts and then you will describe the method and a typical spectra obtain to the board. The questions are:

* 1. What information the method provides and how does it work? (0-3 p.)
  2. What kind of samples can be analysed? (0-3 p.)
  3. What could a possible result look and how is it analysed? (0-4 p.)

1. **A case**

You get a real case (a journal paper or a thesis) where a material has been synthesized. This will be handed out at the same with the method. In the first step you think at least 3 different ways to characterize the material to know if the synthesis has been successful and can tell me what sort of information these methods provide.

* + 1. What methods would you use to characterize this sample? (0/5/10 p.)

At the second stage, I will give you couple image/spectra/data of the paper and you will get a short break to analyse the data (you are allow to think and make notes).

* + 1. What does the data tell you? (0/5/10 p.)

For the end, I will tell you how many points you got from the exam. The points (and final grade) are then visible in MyCourses (if all written parts are accepted).