**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. You will be given two different tasks, 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:

**Task 1 (16 marks)**

Describe a method (chosen randomly from the lottery in the classroom, where all the methods learned in the course are in my doctoral hat) by picking a chit with the method mentioned. Respond to the following questions:

1. What does the method provide, and how does it work? (0-4 p.)
2. What kind of samples can be analyzed with limitations? (0-4 p.)
3. What could a possible result look like, and how is it analyzed? (0-6 p.) + Additional points possible (2 p.) for some examples

**Task 2 (20 marks)**

Choose one paper from mycourse/materials/End-semester-exam-papers, read it, and create a presentation beforehand based on the following points:

1. How is the sample synthesized? (0-2 p.)
2. What methods are used for characterization and why? (0-8 p.)
3. Explain the data. (0-8 p.)
4. Share your thoughts on the characterization—whether it is sufficient (Why?) or needs more. If more is needed, suggest a method and explain why. (0-2 p.)

Present it during the exam for the second task.

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).