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Teaching laboratory practical - important to know and to think about!

It can be difficult to know what the expectations on a lab teacher are and what can be expected from students. In addition, laboratory work has a very specific safety component compared to our other common teaching formats.

We have gathered some important points related to safety, pedagogy, rules and administration, focusing on possibilities and expectations. First is a checklist of essential points to go through during the first lab introduction with a new group of students:

Checklist lab introduction

- Evacuation plan, emergency exits, assembly point
- Fire/evacuation alarm (what to do, how to activate it manually)
- Fire extinguishers (where to find them and how to use them)
- Fire blanket (where to find it and how to use it)
- Emergency shower (where to find it and how to use it)
- Eye shower (where to find it and how to use it)
- First aid material
- Emergency number (00) 112 and emergency phones
- Fume hoods (how to use them safely, what to do in case of low air flow and spill)
- Vermiculite (where to find it and how to use it)
- Course-specific safety information (chemicals, bacteria, equipment, etc.)
- Waste handling (chemicals, bacteria, consumables, sharp material)

Safety

- The teacher can and should dismiss from the lab any student who behaves in ways that threaten their or others' safety. The missed lab session may be completed after agreement with the course coordinator, **at a time when it is possible** (*situation comparable to a missed lab with no valid explanation*). Examples of unacceptable behaviour:
  - Being drunk, or so tired that one cannot perform experiments
  - Refusing to follow the safety instructions such as wearing lab coat, goggles etc, despite repeated reminders
- Lab introductions are mandatory! If a student arrives late and misses the introduction, the lab teacher should deny participation (as stated in the safety regulations). The missed lab session may be completed after agreement with the course director, **at a time when it is possible**.
- If a student has forgotten to bring his/her lab manual, s/he may leave the lab after the lab introduction and print out a new copy without delay. This is, however, the

student's responsibility, not the lab technician's. Students may also share a lab manual in such cases, **as long as** the lab teacher is satisfied that neither safety nor the learning of the lab partner would be jeopardised.

By contrast, if the lab teacher is of the opinion that the forgotten lab manual also shows that the student is unprepared and unfamiliar with the lab exercise in question, the student should be denied participation in the lab.

- Students must wear clothing and shoes that are appropriate for the lab exercise in question. The lab teacher should inform students in advance and may judge what is appropriate. Students with inappropriate clothing are to be excluded from the lab for safety reason.
- Students who are not registered on the course (= not included on the roll call list) are **strictly forbidden from** attending classes and labs. They should be referred to the course office (kursexp@kemi.uu.se).
- Incidents and accidents must always be reported to the Safety Officer of the department and to the course coordinator.

Teaching

- You may dismiss from lab any student who disturbs classes.
- Teachers are expected to teach actively, show commitment and strive for good pedagogy. Teachers must also be present in the lab until all students have left. If you need to leave the lab for a short period of time, be sure to inform the students as well as a colleague nearby (e.g. another teacher, lab technician) of your absence.

  If students want to stay in the lab to complete e.g. calculations without the lab teacher, they should be asked to move to more a more appropriate location instead (e.g. group room, library).
- Your comments concerning the course should be reported to the course coordinator (a section on comments from teachers is included in the short course assessment that summarises the course evaluation).
- The course assessments and relevant parts of the course evaluation can be requested from the course coordinator.
- Course coordinators are expected to organise pre- and post-course meetings for every course. Lab teachers are expected to participate in these, and in any additional meetings that the coordinator organises during the course.
- It is important that information about rules for the submission of lab reports and grades (deadlines, number of resubmissions allowed, consequences unless the rules are followed) is clearly given to the students from the start.
- Lab teachers are expected to attend the teachers' meetings organised by the Chemistry Section.

- Always promptly report suspected cheating/plagiarism to the course coordinator and/or director of studies. Marking of such suspected reports or other work is put on hold until the matter is investigated.
- It is important that all teachers and students be provided with clear information about assessments and grading criteria from the beginning of the course. Ask the course coordinator for information.
- Documentation should always be kept by lab teachers to justify the grades awarded (pass, fail, possible bonus, etc). Remember to report your grades for individual labs in Studium. Ask the course coordinator how this should be done.

Course administration

For staffing purposes it is good that teachers timely inform the director of studies / coordinator about time off / conference etc. It is possible in some cases to swap teaching session with a colleague, but keep in mind that students should not be affected by many teacher changes. Please inform students and the course coordinator

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Rules for submissions, resubmissions, deadlines