

## **Laboratory of Chemical Engineering**

Instructions for work and grading of the class

### **1. General Information**

The course of the laboratory of chemical engineering takes 7 weeks (6 projects + one extra class); two courses of LCE are offered in a semester. The students work in groups where each group has at least two and maximum of three students. The groups working in the same time slot form a shift. A roster with groups (names of the students) and projects (work to be done during the course) of each shift is available on the departmental website ([www.vscht.cz/uchi/](http://www.vscht.cz/uchi/)), or on an official departmental board (by the room B142). The list of teachers for the particular shift is available on the back side of the roster. The teacher whose name is underlined is the leading assistant of that shift and is responsible for the organization of the class. The students are required arrive on time for the laboratory class (latest at the time as found in the official schedule) and be prepared for the class. Drinking and smoking in the laboratory are prohibited. It is mandatory to obey these rules. The course of the laboratory of chemical engineering is graded. The student will pass the course after performing all required projects as given in the roster. Up-to-date manuals for all projects are available on the departmental website: <http://uchi.vscht.cz/index.php/en/studium/bakalarske-studium/laboratore-chi>

### **2. Performing the work**

Before the beginning of each class, each group will turn in a protocol from the project done a week before and will receive a form for writing the measured data. Each member of the group will be examined from the knowledge of the current project, especially from the functions of the apparatus on which the project will be carried out. The exam questions are part of the manuals found on the departmental website. It is not allowed to begin the work without this initial examination and without explicit consent of an assistant.

The measured data are to be written down with a pen (not a pencil) and must not be altered without consent of an assistant. All safety regulations and instructions for work with the laboratory apparatuses must be followed.

One can leave the experimental apparatus for a period of time not exceeding 20 minutes. Running apparatuses have to be attended by at least one member of the group. The group who will leave a running apparatus unattended will be expelled from the class. The project will be unfinished and the group will have to come again (extra class at the end of the course) to finish the project.

The students are required turn in the experimental apparatus in the state the apparatus was in before the class (see the manuals for each project). All members of the group performing the measurement will sign the form with measured data. This form will be further signed by the laboratory instructor who will check the apparatus and an assistant (ideally that one who started the project) who will check the measured data.

The whole group will create one report that has to contain:

- a) filled out and signed form
- b) examples of calculations (used relations + substituted numbers)
- c) all other required attachments as described in the manuals: e. g. graphs.

It is not necessary to include theory, schematics of the experimental apparatuses, etc. The report has to be handed in in the upcoming class after the data were measured (usually one week). The reports not handed in in time will receive a lower grade. The group will have to bring the report by the date determined by the leading assistant. If the report is not submitted by this date, the grade is again lowered. Missing the third chance of submitting the report results in repeating the whole project. **Excuses that the protocol is with a member of the group who is absent are not accepted.**

Incomplete or unsatisfactory reports (e. g. wrong calculations) have to be completed and corrected. The grade of such reports is lowered by one degree. The report can be returned to the students for the revision only twice. If the third version of the report is not satisfactory, the whole group has to repeat the project again and work out a completely new report. The reports handed in one class later can be revised only once. If the report is handed in two classes later and is not accepted by the assistants, the group has to repeat the whole project. The whole group is to be orally examined after submitting the report. This oral examination takes place during or right after the experimental work in the class when the report has been submitted. Each student is required understand the measurement done in the previous class, analysis and processing of the measured data and the theory concerning the project. The students are done with the project only after successful passing of the oral exam and the acceptance of the report.

A group with accepted protocol who has left the class without oral examination will be graded F from the oral examination. Final oral examination can be repeated twice on a day given by the examiner (examining assistant). If any student fails the final examination twice he has to repeat the whole project again.

### 3. Grading of the class

The grade from each project consists of three parts:

- a) Grade before the work: each student of the group is examined from the knowledge concerning the attendance and function of the experimental apparatus with which the student is going to work. The questions asked are part of the manuals. If the student is graded F (numerically 3.5), he cannot perform the measurement and has to come on a different day to perform the experiment. This grade is counted in the final average grade.
- b) Grade from the report: all grades from the reports (the actual grade of the report plus all grades associated with its late submission, incompleteness, etc.) are again part of the final average grade. For example: report submitted one class later (A ----> B or 1 - --> 1.5, total + 0.5), returned twice for revision (+1), and with the actual grade 2.5 will be graded  $0.5+1+2.5=4$ .
- c) Grade from the final examination: the overall grade will be calculated from the actual grade and all attempts graded F. For example, a student who fails once (F=4) and then is graded C (C=2) will obtain final grade  $4+2=6$ .

The final grade from the course will be calculated as an arithmetic mean rounded on two decimal positions from all grades the student has received in the whole course.

The final grading:

1 – 1.24	A
1.25 – 1.74	B
1.75 – 2.24	C
2.25 – 2.74	D
2.75 – 3.49	E
> 3.5	F

The student with final grading of F has to enroll in the course again!

#### **4. Absence:**

Any reasons for absence are only accepted by the leading assistant of the given shift latest 14 days after the absence. Only serious reasons of absence are going to be accepted.

#### **5. Missed classes**

The students have to conduct all projects as given in the roster for the particular shift. If for any reason (absence, grading with F, etc.) one or more projects have not been done, the student have to come on another day to finish it/them. This is possible in another shift of the same course or in the extra class of the same shift (usually the last class of the shift). In special cases (long accepted absence) the project(-s) can be done in the later course. The student is responsible for finding a free slot by communicating with leading assistants of that later course. The leading assistant can allow the student to perform project that is different from that one in the original roster. The leading assistant of the student will determine the actual date for performing the project, the date of the report submission and the final oral examination. If the project is done by students from different shifts, groups or even courses, every student from a different group has to turn in his own protocol.

All students will come to the last class of the laboratory of CE even if they are not scheduled to do any experiments. These students will submit their protocols and will be orally examined.

The student who will not be able to finish all the projects required for passing the course for accepted reasons will be allowed to complete the course in the closest realizable date. In these cases, the details are to be communicated with the head of the laboratories or his deputy.

The students who will fail the course owing to their mistakes will have to enroll in the course again.

#### **6. Further enactments**

The cases not determined by these rules will be decided by the leading assistant of the shift, if they are not within his competences, then by his superiors.

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