

**Syllabus – CHEM 471**  
**Physical Chemistry Laboratory Class**  
Monday, Wednesday 2:00PM - 5:00PM  
Office hours: by appointment

**First mandatory meeting for this class Dunbar Hall 154, January 18<sup>th</sup>, 2017, 2 p.m. – 3 p.m., 2017**

**A detailed class schedule will be provided during the first meeting as a separate handout.  
Groups of two students will be set up during the 1<sup>st</sup> meeting.**

**Instructor**

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**TAs**

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**Course description:** Physical chemistry laboratory class for (chemistry) undergraduates.

**Prereq:** MATH 147 or MATH 166, PHYS 212, CHEM 365 or CHEM 364

**You have to take the university safety class and/or the online safety quiz before conducting your first experiment. I will ask you to sign a form which acknowledges your participation in all by NDSU required safety classes and safety quizzes. You will not be allowed to do any experiments before you have finished the NDSU safety quiz.**

**General course outline:** The laboratory class includes experiments related to chemical kinetics, thermodynamics, and quantum mechanics.

**Class objective:** The objective of this class is to gain practical skills in physical chemistry and scientific writing.

**Grading:** Conducting the experiments is mandatory, but grading is based on the written lab reports and not on participating in the experiments. In the last week of the class, a quiz will be offered which will count as one additional lab report. The first assignment is a homework assignment (error propagation exercise) which also will count as one lab report. The final grade is based on averaging all grades for all lab reports.

**Final grade:** A 85%+; B: 65%+; C: 50%+; D: 35+; F: <35% and/or no lab reports turned in

The grading scale may be adjusted in cases of special circumstances. However, the class will not be graded along a curve, i.e., work together. It will not help you if other students obtain bad grades, however, **no cheating**. NDSU is enforcing strict sanctions toward students who cheat on exams, quizzes, homework, etc. Each student has to turn in his/her own unique lab reports. Don't copy from classmates or websites in any assignment or exam.

**Attendance** It is expected that you conduct all experiments safely and prepare for the experiments in advance. A detailed lab handout will be provided. Read it in advance. You may need to re-read physical chemistry textbooks to prepare for the experiments.

**Handouts:** During the first meeting a lab handout will be provided for free.

**Private but confidential evaluations:** I will make a private but confidential class evaluation form available approx. every four weeks. This is voluntarily! However, take that as a chance to modify/affect/influence my teaching style, etc., i.e. as a chance to provide some feedback to me, just in time. Also, feel free to do so in person. I will not take professional criticism personally; it will not affect your grade or my behavior with respect to you. Additionally, I also use online (web based) evaluations which are perfectly confidential (see <http://www.uweburghaus.us/contact.html>).

**Special needs:** Any students with disabilities or other special needs, who need special accommodations in this course, are invited to share these concerns or requests with the instructor and contact the Disability Services Office ([www.ndsu.edu/disabilityservices](http://www.ndsu.edu/disabilityservices)) as soon as possible.

**Academic honesty statement** The academic community is operated on the basis of honesty, integrity, and fair play. NDSU Policy 335: "Code of Academic Responsibility and Conduct" applies to cases in which cheating, plagiarism, or

other academic misconduct have occurred in an instructional context. Students found guilty of academic misconduct are subject to penalties, up to and possibly including suspension and/or expulsion. Student academic misconduct records are maintained by the Office of Registration and Records. Informational resources about academic honesty for students and instructional staff members can be found at [www.ndsu.edu/academichonesty](http://www.ndsu.edu/academichonesty).

**Veterans** and student service members with special circumstances or who are activated are encouraged to notify the instructor as soon as possible and are encouraged to provide Activation Orders.

**University policies:** All work in this course must be completed consistent with NDSU university policy.

**The following laboratory rules are part of this syllabus:**

- 1. You have to take the university safety class or the online quiz before conducting your first experiment. I will ask you to sign a form which acknowledges your participation. You will not be allowed to do any experiments before you have finished the NDSU safety quiz. Print (or better save as PDF) the certificate of the online quiz and e-mail to me.**
2. You will not be allowed to do the experiment without a proper preparation in advance, i.e. read at least the lab handout in advance (Why? E.g., see above).
- 3. We will stay with the official schedule of the class** if possible. However, we have only 15 weeks for the class and a number of holidays. **Therefore, we will not (cannot) provide additional dates.** If you miss your lab appointment, it may be impossible to obtain another one, i.e., you would obtain zero points for this experiment. We will set up a detailed list with all dates during the first meeting of the class.
4. Groups of two/three students but “independent” lab reports.
5. You will conduct the experiments with the TA. That is, the TA will get you started and will keep an eye on how safely and accurately you handle the equipment. Pass the lab reports to the TA of the given experiment unless otherwise noted.
- 6. Due dates:** The due date for the lab report is generally 10 days after you have conducted the experiment.
- 7. Meeting point with the TA is Ladd Hall 202 unless otherwise noted by the TA.**
8. You have to participate in all experiments. We accept laboratory reports only if you participated successfully in the experiment.
9. Your grade will be based entirely on the quality of your laboratory reports. **If you do not turn in any of the laboratory reports at all, your class grade will be “F” = failed.**
10. Grading: 100 points for each experiment, minus 2 points for each day delay in turning in the laboratory report. More detailed grading schematics (e.g. abstract 10 points, discussion 50 points etc.) are part of the lab handout.