

Chemistry 4501

Thermodynamics and Chemical Kinetics

Room 220, Bruininks Hall
MWF at 11:15 am -12:05 pm, Spring Semester, 2017

Instructor: Professor Jiali Gao, 241A Smith Hall, 625-0769, jgao@umn.edu (a subject line keyword of 4501 is needed for a response to class related questions).

Website: Your Web Moodle

Office Hours: Monday 3:00-5:00 pm; Smith 241A, or by appointment.

Exception: Jan. 23, which is changed to Wed., Jan 25, 3-5 pm.

TA: Katelyn Youmans (Kolthoff 63 or TBD; youn0013@umn.edu)
Shawn Balcome (Kolthoff 63 or TBD; balc0022@umn.edu)

Office Hours: Kolthoff 135
3:00-4:30 pm on Tuesday, Wednesday, Thursday and Friday.

Texts: Physical Chemistry: A Molecular Approach by D. A. McQuarrie and J. D. Simon. University Science Books, 1997. ISBN: 0-935702-99-7.

Optional: Problems and Solutions to Accompany Molecular Thermodynamics by Heather Cox. University Science Books, 1997. ISBN: 0-935702-43-1

Exams: **Three Midterm Exams (100 pts each, dates see Course Calendar).**
Final Exam (200 pts), Scheduled by the University Calendar.
(Current Schedule: **10:30 p.m.-12:30 p.m., Thursday, May 11, 2017**)

There will be no make-up exams.

Homework: **Assigned on Moodle** approximately every week. Each homework assignment will be due on the date specified on Moodle. I will randomly selected five (5) assignments for grading. They will be announced the Friday before the following Monday to turn in. Homework is an integral part of this class, which should be completed immediately after the lecture and cannot be substituted simply by looking at answers. Thus, you need to actually do the homework to ensure that you keep pace with lectures.

Distribution: Homework 50 pts
Midterms 300 (3x100) pts
Final 200 pts

Total 550 pts

Course outline: During this semester, we will cover Chapters 16-29 of the text. Lectures will follow the text closely, but may go into greater details on certain topics or may omit some other subjects. You will be responsible for all materials covered by the lecture when you prepare for exams. *You should read the text lightly before the lecture, then study thoroughly after the lecture.* It is suggested that you work out all problems at

the end of each chapter. Problems assigned for each chapter are the absolute minimum and they should not be regarded as the only requirement for this class.

Grading: Full range of A-F, and +/- grades will be used to assign a course grade according to your performance on the examination and other assignments. A rough estimate of the course grade is A's (A- & A) (85-100%), Bs (B-, B, & B+) (70-85%), Cs (C-, C, & C+) (60-70%), D (40-60%), and F (0-40%). There is no limit or cap on the number of A's or B's or F's, etc., in this class. For example, if all of you received a combined score of more than 85%, you will all receive at least an A- grade. Thus, it is important you realize that **you are not competing against your fellow students**; hence, it is strongly encouraged that you form study groups to work together. Both asking questions and explaining problems are good learning experience. Finally, any student who does not officially withdraw and who does not satisfactorily complete the course will receive an F.

Regrading request for partial credits on show-answer questions will be accepted and examined prior to the final letter grades are submitted, after which no grade changes will be made (unless an error in the total score tabulation is discovered).

Incomplete: Will be given only under exceptional circumstances, such as an extended illness certified by a medical doctor, and Department policies dictate that you must have a passing grade on all midterm exams and only miss the final exam. If you receive an incomplete, you must complete all requirements to remove the incomplete by the end of the following academic year, i.e., the Spring semester, 2018, or the incomplete will automatically be changed to an F.

Missed Exams: Any unexcused absence from an examination or failed to turn in homework assignment will result in a grade of zero points for that exam or homework. You should get permission before the exam if you must be absent from an exam. Personal business will not be accepted as an excuse, so, you should make plan of your schedule accordingly.

Policy on Academic Dishonesty: Please visit Office for Student Conduct and Academic Integrity: <http://www.oscai.umn.edu/conduct/student/index.html>. Scholastic dishonesty is any conduct described as follows (from CLA Classroom Grading and Examination Procedures): "*Scholastic Dishonesty means plagiarizing; cheating on assignments or examinations; engaging in unauthorized collaboration on academic work; taking, acquiring, or using test materials without faculty permission; submitting false or incomplete records of academic achievement; acting alone or in cooperation with another to falsify records or to obtain dishonestly grades, honors, awards, or professional endorsement; altering, forging, or misusing a University academic record; or fabricating or falsifying data, research procedures, or data analysis.*"

If a student was found cheating in any form, the instructor may assign a grade of zero on the work involved or an F for the entire course, and may report the matter to the student's college Scholastic Conduct Committee.