

University of Montana

ScholarWorks at University of Montana

University of Montana Course Syllabi

Open Educational Resources (OER)

Fall 9-1-2021

CHMY 373.01: Physical Chemistry I - Thermodynamics and Kinetics

Xi Chu

University of Montana, Missoula, xi.chu@umontana.edu

Follow this and additional works at: <https://scholarworks.umt.edu/syllabi>

Let us know how access to this document benefits you.

Recommended Citation

Chu, Xi, "CHMY 373.01: Physical Chemistry I - Thermodynamics and Kinetics" (2021). *University of Montana Course Syllabi*. 12138.

<https://scholarworks.umt.edu/syllabi/12138>

This Syllabus is brought to you for free and open access by the Open Educational Resources (OER) at ScholarWorks at University of Montana. It has been accepted for inclusion in University of Montana Course Syllabi by an authorized administrator of ScholarWorks at University of Montana. For more information, please contact scholarworks@mso.umt.edu.

Chemistry 373 Physical Chemistry I: Thermodynamics and Kinetics

Autumn semester 2021

The University of Montana

(Dated: August 30, 2021)

Instructor	Prof. Xi Chu
Office	Chemistry 008 A
Telephone	(406) 243-4407
Lecture notes, HW, & resource	http://tccl.chem.umt.edu/chmy373/
Email	xi.chu@mso.umt.edu
Class meeting	MWF 12:00 pm-12:50 pm Chemistry 102
Quizzes/recitation	Thursday 2:00-2:50 except for occasional lectures at this time
Exams	Thursday 2:00-3:50 Chemistry 102
Office hours	arranged on individual basis by appointment
Textbook	Physical Chemistry, third edition, by Engel and Reid

Note: Please wear a mask to attend the in-person class. The third edition of the text book is preferred, because the page and problem numbers in the homework assignment will be according to this edition. If you get other editions for some reason, it may work, although you will have to make extra effort to compare the examples and problems with the third edition.

Course description

Chemistry 373, thermodynamics and kinetics, is the first semester of a two-semester series in physical chemistry. Students are expected to learn the basic principles and methodologies of equilibrium thermodynamics and kinetics, which are necessary for studies and employment in chemistry.

Learning outcomes

The following topics are covered in this course:

1. Four basic laws of thermodynamics
2. Basic thermochemistry
3. Phase equilibrium
4. Elementary reaction kinetics
5. Rate law
6. Boltzmann distribution

You are expected to be familiar with the basic principles of all topics listed above upon successfully finishing the class.

Course structure

I will lecture during MWF classes. Attending lectures is crucial for success in this class.

Thursdays are for quizzes, exams, discussions of homework problems, and occasional lecturing. We have 10 quizzes scheduled for the semester.

Homework

Every week you will be assigned 5 to 10 exercises, which are posted on the class website and will not be graded.

Quizzes

The quizzes are at 2:00 pm on Thursdays.

Exams

In addition to the final, there will be two hour-long exams. Dates are to be arranged according to progress. Please be familiar with the University of Montana student conduct code that will govern behavior in Chemistry 373.

Grading

Your course grade will be based on the total points of the exams and quizzes:

Hour exams	200
Final exam	200
Quizzes 20 pts each	100
Total	500

Note that out of the ten quizzes, five of your best scored ones will be counted towards the total.

Important dates

Important dates and deadlines for autumn semester 2021 can be found at <https://www.umt.edu/registrar/calendar/autumn-2021.php>

Policy for accommodating disabilities

This course is accessible to and usable by otherwise qualified students with disabilities. To request reasonable program modifications, please consult with the instructor. The Office for Disability Equity (ODE) will assist the instructor and student in the modification process. For more information, visit to the ODE website at <https://www.umt.edu/disability/>

Policy on academic honesty

All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University.

All students need to be familiar with the academic honesty states, which are available on line atb <http://www.business.umt.edu/ethics/academic-honesty.php>