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CHEM 371.01: Physical Chemistry I

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The University Of Montana

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Chemistry 371

A systematic treatment of the laws and theories relating to chemical phenomena.

Autumn 2000 MWF 8:10-9:00 am CP102

Instructor: Sherri Arrieta **Office:** CP 006 **Contact:** Phone: 243-4163
e-mail: arrieta@selway.umt.edu

Required Textbook: *Physical Chemistry* by George Woodbury

Office Hours: MWF 9-10

You are welcome to stop in with questions at anytime, *except Tuesdays*.
The above office hours simply guarantee that I will be there.

Prerequisites: Chem 162, Math 251 (Calculus III), Phys 122 or 221, CS 101 or 172.

Mathematics is the foundation of physical chemistry. I strongly recommend you have an adequate background in mathematics (as required above) before enrolling in this course.

Homework: I believe it is absolutely necessary to work problems in order to learn chemical concepts and **highly recommend** you complete, *at least*, all the problems within the text as you read the chapters. Doing this will make points more valid and keep you awake (which is a most important step in the learning process). As we cover the text I will also suggest other problems to help focus your studies.

Help Sessions: ?

Examinations: There will be *three one-hour, in-class exams* during the semester. Each of these exams covers approximately three chapters and will be given on Fridays with a review/help session the night before (see calendar). The class will conclude with a *final exam* on Wednesday, December 20, which will be comprehensive but emphasize (60-70%) material covered after the third exam. It is likely that I will be at a conference Dec. 15-19. We can schedule a review session sometime on Dec. 19, but I will not be available before then.

Possible Points:

Exams (100 points x 3 exams)	300
Final	<u>200</u>
	500 total points possible

Chemistry 371

Autumn 2000

September:	6	Wed.	<i>Chapter 1. Preliminaries.</i>
	8	Fri.	
	11	Mon.	<i>Chapter 2. First Law of Thermodynamics.</i>
	13	Wed.	
	15	Fri.	
	18	Mon.	
	20	Wed.	<i>Chapter 3. Second Law of Thermodynamics.</i>
	22	Fri.	
	25	Mon.	
27	Wed.		
29	Fri.		
October:	2	Mon.	<i>Chapter 4. Mathematical Tools.</i>
	4	Wed.	
	6	Fri.	Exam 1. Chapters 1-4 <i>Review session: Thurs. 7-9 pm</i>
	9	Mon.	<i>Chapter 5. Fundamental Equations and Free Energy.</i>
	11	Wed.	
	13	Fri.	
	16	Mon.	<i>Chapter 6. Pure Substances.</i>
	18	Wed.	
	20	Fri.	
	23	Mon.	<i>Chapter 7. Mixtures.</i>
	25	Wed.	
	27	Fri.	
	30	Mon.	<i>Chapter 8. Chemical Equilibrium.</i>
November:	1	Wed.	
	3	Fri.	Exam 2. Chapters 5-7 <i>Review session: Thurs. 7-9 pm</i>
	6	Mon.	<i>Chapter 9. Phase Equilibria with Solutions I.</i>
	8	Wed.	
	(10	Fri.	No Class- Veteran's Day)
	13	Mon.	
	15	Wed.	<i>Chapter 10. Electrolyte Solutions.</i>
	17	Fri.	
	20	Mon.	
	(22	Wed.	No Class- Thanksgiving Break)
	(24	Fri.	No Class- Thanksgiving Break)
27	Mon.	<i>Chapter 11. Phase Equilibria with Solutions II.</i>	
29	Wed.		
December:	1	Fri.	Exam 3. Chapters 8-10 <i>Review session: Thurs. 7-9 pm</i>
	4	Mon.	<i>Chapter 12. Electrochemical Cells.</i>
	6	Wed.	
	8	Fri.	
	11	Mon.	<i>Chapter 13. Thermodynamics of Surfaces.</i>
	13	Wed.	
15	Fri.		

Final Exam: Wednesday, December 20

8:10 am- 10:10 am