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Chem 177 Chemistry Department Homepage: <https://www.courses.chem.iastate.edu/courses/2023/spring/chem-178>

Canvas: <https://www.celt.iastate.edu/learning-technologies/canvas-isu/>

Top Hat: <https://success.tophat.com/s/>

CHEM 178 is a co-requisite for CHEM 178L, i.e., students in CHEM 178L must register for CHEM 178, but students in CHEM 178 are not required to take CHEM 178L. Students who drop or change to AUDIT classification in CHEM 178 must drop CHEM 178L. Students may not register to audit CHEM 178 after 5:00pm on Monday, January 23, 2023. The audit does not count towards full time student status. The last day to drop a class without extenuating circumstances is Friday February 15, 2019.

Required Textbooks & Supplies: *Chemistry* (10th Edition), Zumdahl, Zumdahl, DeCoste, Cengage: Boston. This book is part of the **Inclusive Access** program at Iowa State, which means that by enrolling in this course you will have the e-book version and the electronic homework included as part of your U-Bill. By using this option, the book and homework comes at a total cost of \$75, which is a much lower price than other textbook/homework options.

- Top Hat Subscription; ISBN: 978-0-986-615115

Top Hat Response Technology;

We will begin using a response system based on your phone or tablet on day two and assessing points starting on Wednesday, January 18, as a practice, **and for points on Monday, January 23**. We will be using the Top Hat (www.tophat.com) classroom response system in class. You will be able to submit answers to in-class questions using smartphones, tablets, laptops, or through text messaging. You can visit the Top Hat Overview (support.tophat.com/hc/en-us/articles/200019034-Top-Hat-Overview-Getting-Started) within the Top Hat Success Center which outlines how you can register for a Top Hat account, as well as provides a brief overview to get you up and running with the system. An email invitation to join your Top Hat space will be sent to you by Prof. Holme, but if you don't receive it, you can still create your student account at tophat.com. You will be required to purchase a Top Hat license from the ISU Book Store or online in order to access any quizzes or questions your instructor creates in the Top Hat system. Should you require assistance with Top Hat at any time please contact the IT Solution Center at 515-294-4000 or solution@iastate.edu.

Nonprogrammable scientific calculator (with $\ln x$, e^x , $\log x$, 10^x , y^x functions). Calculators with graphing and text capabilities may not be used during exams and quizzes. All calculators are subject to inspection during exams and quizzes; improper calculators may be temporarily confiscated. Bring your own calculator to class and recitation. Your mobile phone **cannot** be used as a calculator on a test.

OWL V2: OWL V2 is an online homework and tutorial system that is associated with our textbook. Because we have Inclusive Access you **SHOULD NOT** buy an "access code" for OWL. You already have access by signing up for this course (as long as you haven't taken actions to override the Inclusive Access billing on your UBill.) You will be able to access the Homework, the ebook and a set of "animations" associated with the book directly from the Canvas page for the course. The homework assigned you see are specifically for students in the 3:20 PM M/W class in Troxel 1001.

Lectures:

Prof. Holme's sections of Chem 178 meet at 3:20 PM on Mondays and Wednesdays in Troxel 1001. Students are expected to attend lecture and are *responsible for knowing information that is provided in announcements* that are given at the beginning of each lecture. You need a Top Hat account and to bring your device (probably your smart phone) with you to every lecture.

Students who regularly attend lectures tend to understand the material better, perform better on exams, and achieve higher grades. Active participation in the periodic discussions (often associated with Top Hat questions) shows a strong correlation with improved course performance. Lecture capture is part of the facilities in 1001 Troxel, so you will be able to review class afterwards. Prof. Holme also posts PDF versions (with some missing information) of his lectures BEFORE class, so you can have the option of printing these out so you do not need to try to copy all of the notes from the powerpoint portion of the lecture and can focus on the ways those notes are augmented in the class.

There is significant research that shows students who have computers open in class, even those who are trying hard to take notes on those computers, generally have lower performance in the class. Importantly, there is also evidence that students who sit near students with open computers are also adversely affected by the possibility of distraction. That said, Prof. Holme does not forbid computer-based note taking in class. He may, however, limit where people who are using computers in lecture may sit (to reduce the possibility of them having a negative effect on their classmates.) The specific geography of this system will be explained the first day of class and during announcements as the semester continues if it appears important to provide places for those who don't wish to have computers open near them.

Points in the course:

There are 4 aspects of the course that can contribute 50 points each.

TopHat: You are required to accumulate 50 points from clicker questions. Probably around ~65 points worth of chances will be given to accumulate needed clicker points. Missing 2-3 classes does not greatly affect your clicker score. Clicker scores are based mostly on participation so we are mostly rewarding the idea of engaging in the material. When something is new, it's OK to make some mistakes – the key is to learn from them. We also realize that technology doesn't always work just right, so missing 1 TopHat question doesn't alter your score for that day in class, for example. **NOTE: Because Top Hat sends questions to your phone, we will occasionally have "check" questions that will be improbable to answer correctly if you are not in class. I will also occasionally have students in class write out answers for questions on paper and turn them in. Answering Top Hat questions when you are not in class is a form of academic misconduct, see below for information about how Dr. Holme handles such cases.**

OWL V2: OWL V2 is the online homework system. Assignments associated with each chapter in the textbook will occur as we move through the semester. Depending on the content, questions will translate into either 1 point per question or 0.5 point per question. The maximum points for OWL will be 50 points, but there will be ~65-70 points available, so missing a questions here or there (sometimes it is hard to know what OWL thinks is wrong with an answer, for example) does not prevent you from getting the full 50 points.

Recitation: On Fridays you will meet in smaller groups with a teaching assistant (TA); **attendance is expected** at all recitation sessions. Recitation sessions will be used to discuss questions, work some end-of-chapter problems, and discuss ways in which the chemistry content connects to other science courses and to real-world issues. There will be quiz exercises done during many of recitation sessions. The goal of these exercises is to have you work problems from scratch, with the combined understanding of the group available. They will be scored based on effort towards a correct answer (so having a small error, for example, would not prevent getting points for the quiz.) There are **no make-up opportunities for these exercises when they occur, but the system is set up so that missing a discussion quiz or 2 does not prevent you from getting to the full 50 points they are cumulatively worth.** Athletes and students who are away from campus for ISU games, matches, or club trips and cannot attend a recitation where a group quiz is done, must discuss their options with Prof. Holme as soon as possible. At the end of the semester, the sum of the group quizzes will be worth a maximum of 50 points towards of your grade.

Every group quiz will be scored as 0 or 1. (0 for missed quizzes, or cases where very little progress is made by the group and 1 is scored for reasonable progress, including the correct answer if possible.) We anticipate there will be at least 10 group

quizzes and full credit will be obtained by participating in at least 8 of them. The quiz participation will translate into 50 points based on this chart.

1 or less	2	3	4 or 5	6 or 7	8 or more
0	10	20	30	40	50

Writing Assignment: Communication skills are routinely listed by companies who hire scientists and engineers as one of the most important and yet often underdeveloped skills that they seek in new employees. Therefore, Prof. Holme has at least one short writing assignment in all of his classes, even ones as large as Chem 178. In this case, the writing assignment will be associated with applying principles we learn in chemistry to problems of sustainability. Considered broadly, *sustainability creates and maintains the conditions under which humans and nature can exist in productive harmony, that permit fulfilling the social, economic and other requirements of **present and future generations***. Science and engineering play an important role in building sustainability, so we will make connections to this idea occasionally in this course. For the purpose of the writing assignment, however, we will focus on how reaction kinetics (the speed of reactions) is connected to sustainability. There are several possible ways to frame this topic, and you need to choose what area is of the most interest to you. These things include, but are not limited to, (1) what reactions related to sustainability are fast and what ones are slower?; (2) temperature plays a role in kinetics – how does the use of energy to create higher temperatures for important reactions influence sustainability?; (3) some important reactions can be sped up using catalysts, which of these catalysis applications influence issues related to sustainability?

The writing assignment **will be brief**, because Prof. Holme must read them all to grade them. **Therefore, these written assignments may not be any longer than 500 words.** You need to include a bibliography, and those words do not count in the 500-word maximum. An important part of this assignment is deciding on an appropriate topic under the general heading of critical materials, one that will be capable of being described reasonably in such a short paper. The final draft of the paper is due **March 1**. More details and guidelines about the writing assignment will be given in announcements in lecture. Writing assignments are submitted through Canvas and will automatically be checked for plagiarism. Cases of plagiarism are considered a form of academic misconduct, **see below for information about how Dr. Holme handles such cases.**

Exam points in the class: Each hour exam is worth 90 points, and the final exam is worth 130 points. Performing better on the final exam than your score on the hour exam can earn redemption points (described briefly below).

Hour Exams: In addition to the Final Exam (given during the week of May 6-9), there will be **THREE** one-hour exams that will be held in class on **February 13, March 22, and April 19**. These exams will be designed to be finished by most students in 40-45 minutes. **There are no make-up exams scheduled after an hour exam has been completed, no exceptions.** Missed exams require a face-to-face discussion with Prof. Holme (not your TA). Appropriate excused absences may be made up based on performance on the material covered in that missed test. If a student misses two hourly exams, they will only be able to make up one of those exams with the final (see the next paragraph for some details about how the final allows for make-up points). Students are urged to be proactive and communicate to the instructors, in a timely manner, if anything prevents them from taking an exam. Athletes and students who are away from campus for ISU games, matches, or club trips and cannot take the exam as scheduled, must discuss their options with the instructors as soon as possible. Cell phones, computers, iPads, iPods etc may not be used during exams. Taking pictures of exams is treated as a particularly serious form of academic misconduct.

We will use the final exam to establish “redemption points” which allow students to earn back points lost on hour exams. The final exam is cumulative, and we can identify which content is associated with each test (roughly 20 out of 70 questions for each test) and if you answer more questions correctly on the final exam, redemption points will be added to your score for the semester. This process will be explained several times throughout the semester. The redemption points also provide the mechanism we will use to allow students to make-up a missed exam. There is no limit to how many points can be recovered with the redemption points... if you answer all questions on the final associated with an hour exam, you will get enough redemption points to have that exam equal 90 (maximum) points.

Exams will be returned to students during the recitation session on the Friday following each exam. Any requests for regrades must be submitted at the recitation where the exam is returned to students. A periodic table, appropriate equations, and physical constants will be provided with each exam. **Language translators and dictionaries are not allowed during quizzes and exams.**

Grades: Your course final grade is based on 3 hourly exams (270 pts total), recitation group quizzes (50 pts), OWL homework problems (50 pts), in-class (Top Hat) response system (50 pts), the writing assignment (50 pts) and the Final exam (130 pts) for a total possible 600 points. Based on this amount of available points, letter grade scale in the table below will be used to determine your final letter grade. **NOTE: this table is not identical to what Canvas estimates are so Canvas is just a bit off on borderline cases – these point cutoffs are what is used, not the Canvas “estimated grade”.**

A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F
Above 560	540-559	520-539	495-519	470-494	445-469	420-444	390-419	360-389	330-359	300-320	Below 300

Important: These cutoff scores are expected to lead to a grade distribution that will be consistent with prior semesters and other sections of Chem 178 in this semester. Students near grade borderlines (typically within 2 points) are explicitly checked to determine if a higher grade is warranted – but even in these cases students often do not receive the higher grade. Students who have missed a few classes are less likely to get bumped up to a higher grade. If you are 3 points or more from a cutoff, in a class this large there are many people closer to the higher grade than you, and you are not competitive to obtain the higher grade. Once the final exam has been taken, there is no other way to obtain more points. Extra credit points are very unlikely in this course, but if they are offered, the activities will occur during the semester and will be made available to ALL students – individual requests to do extra credit cannot be granted.

Important Course Policy: It is the student’s responsibility to check grades on Canvas. Any student who discovers an error in a grade on Canvas must contact the teaching assistant and bring the graded work to their TA **within 1 week** of receiving the returned graded work to have the grade corrected.

Accessibility: Iowa State University is committed to assuring that all educational activities are free from discrimination and harassment based on disability status. Students requesting accommodations for a documented disability are required to work directly with staff in Student Accessibility Services (SAS) to establish eligibility and learn about related processes before accommodations will be identified. After eligibility is established, SAS staff will create and issue a Notification Letter for each course listing approved reasonable accommodations. This document will be made available to the student and instructor either electronically or in hard-copy every semester. Students and instructors are encouraged to review contents of the Notification Letters as early in the semester as possible to identify a specific, timely plan to deliver/receive the indicated accommodations. Reasonable accommodations are not retroactive in nature and are not intended to be an unfair advantage. Additional information or assistance is available online at www.sas.dso.iastate.edu, by contacting SAS staff by email at accessibility@iastate.edu, or by calling 515-294-7220. Student Accessibility Services is a unit in the Dean of Students Office located at 1076 Student Services Building.

Academic Misconduct: The class will follow Iowa State University’s policy on academic dishonesty. Anyone suspected of academic dishonesty will be reported to the [Dean of Students Office](#). See the Conduct Code at <https://www.policy.iastate.edu/policy/SDR#4.0> for more details and a full explanation of the ISU Academic Misconduct policies. Instances of suspected academic misconduct will be reported to the Dean of Students’ office.

Resources: Important announcements, previous semesters’ hour exams, this syllabus, lecture notes, and exam review sheets, as well as other useful information are posted on Canvas. Throughout the semester items will be added to Canvas. **Deadlines are always noted in the pre-class “Keeping Track” sheet that is up before lecture starts, and is captured in lecture capture, so that is the authoritative source of deadlines.** Canvas (particularly the parts with

assignments connected to OWL) is NOT always a reliable source for deadlines, so do not rely on Canvas to remind you that something is due. Keep notes from the “Keeping Track” information before class.

Chemistry Help Center: Teaching assistants are available in the **Martha E. Russell Chemistry Help Center and Resource Room, room 1761 Gilman**. This Center is staffed by general chemistry teaching assistants and is open M – R, 9 – 5, and F, 9 – 1. Answers to all previous quizzes and previous exams are on file in the Center. Resources in the Help Center are not to be removed from the room. For more help, visit Prof. Holme during his office hours.

Supplemental Instruction (SI) sessions and materials are provided by the Academic Success Center and are prepared by the SI leaders. They are not provided by the course instructors, but I will work with the SI instructors to help them provide high quality help particularly for the problems solving aspects of this class.

How to e-mail your Chem 177 Instructors: Email is often not a particularly rapid way to communicate, but Prof. Holme does make every effort to respond to emails. Your TA will fill you in about email availability when you meet them in Discussion.

Problems and Questions: Please check on *Canvas* to see if your question or issue can be answered under the [Frequently Asked Questions \(FAQ\) section](#). If you are having issues with **Canvas** or the electronic grade-book, contact your recitation TA directly. If you are having issues with **OWL V2**, visit: <https://www.cengage.com/student-training/owlv2/canvas/ia-yes/> (if the issue is not resolved with the OWL support, then please contact Prof. Holme with the detailed description of the issue). Note that we will not be able to solve technical issues such as registration, access to the internet, etc. You are however encouraged to let me know if you are unable to complete an assignment due to technical difficulties.

Free Speech: Iowa State University supports and upholds the First Amendment protection of [freedom of speech](#) and the principle of [academic freedom](#) in order to foster a learning environment where open inquiry and the vigorous debate of a diversity of ideas are encouraged. Students will not be penalized for the content or viewpoints of their speech as long as student expression in a class context is germane to the subject matter of the class and conveyed in an appropriate manner.

Harassment and Discrimination: Iowa State University does not discriminate on the basis of race, color, age, ethnicity, religion, national origin, pregnancy, sexual orientation, gender identity, genetic information, sex, marital status, disability, or status as a U.S. Veteran. Inquiries regarding non-discrimination policies may be directed to Office of Equal Opportunity, 3410 Beardshear Hall, 515 Morrill Road, Ames, Iowa 50011, Tel. 515-294-7612, Hotline 515-294-1222, email eooffice@iastate.edu

Religious Accommodation: Iowa State University welcomes diversity of religious beliefs and practices, recognizing the contributions differing experiences and viewpoints can bring to the community. There may be times when an academic requirement conflicts with religious observances and practices. If that happens, students may request the reasonable accommodation for religious practices. In all cases, you must put your request in writing. The instructor will review the situation in an effort to provide a reasonable accommodation when possible to do so without fundamentally altering a course. For students, you should first discuss the conflict and your requested accommodation with your professor at the earliest possible time. You or your instructor may also seek assistance from the [Dean of Students Office](#) at 515-294-1020 or the [Office of Equal Opportunity](#) at 515-294-7612.

Course Goal/Learning Outcome: Upon successful completion of this course, students will have mastered fundamental concepts in general chemistry and will be able to pursue upper level chemistry courses as well as specialized studies in other fields of science and engineering.

Learning Objectives: In general, upon successful completion of the course, students will have refined their study skills (prepare for lecture, quizzes, and exams; study consistently and effectively; practice), will be able to describe chemical phenomena using macroscopic, particulate and symbolic representations; and will have learned to appreciate the

importance of chemistry in their major and of science in their everyday life. Significant learning goals for students enrolled in CHEM 178 include, but need not be limited to

Intermolecular Forces and Physical Properties (Ch. 10 & 11)

- Key intermolecular forces
- Dependence of physical properties on intermolecular forces
- Heating/cooling curves and phase diagrams
- Intermolecular forces and solutions
- Colligative properties
- Heating/cooling diagrams and phase diagrams

Chemical Kinetics (Ch. 12)

- Understanding the concepts of relative rates, average rates, and instantaneous rates of reactions
- Using relative rate expressions to determine the rates of change for each component of a reaction
- Understanding the components of a rate law: order and rate constant
- Using the method of initial rates to determine the rate law for a reaction
- Understanding the difference between first- and second-order kinetics
- Using experimental data to assess whether a reaction is first- or second-order for a component
- Relating half-life with rate constants and initial concentrations in first- and second-order reactions
- Understanding the energy profile for a chemical reaction
- Understanding how activation energy is affected by a catalyst or temperature
- Understanding how to work with mechanisms of a chemical reaction
- Understanding how to write the rate law for an elementary step in a mechanism
- Identifying reactants, products, intermediates, and catalysts in a mechanism
- Determining the rate-determining step of a mechanism and its significance to kinetics

Chemical Equilibrium (Ch. 13)

- Understanding the definition of equilibrium, its conditions and features
- Recognizing the difference between homogeneous and heterogeneous equilibrium reactions
- Writing the proper mass-action expression for the equilibrium constant K of a chemical process
- Understanding the meaning of the value of the equilibrium constant K
- Understanding the difference between K_p and K_c
- Determining equilibrium constants for chemical reactions that have been manipulated by reversal, combination, or scaling (multiplying by an integer)
- Understanding the significance of the reaction quotient
- Using stoichiometry and I-C-E tables to calculate equilibrium characteristics of a reaction
- Understanding LeChâtelier's principle and utilizing it to predict processes/reactions

Acid-Base Equilibria (Ch. 14)

- Understanding the Arrhenius, Brønsted-Lowry, and Lewis definitions of acids and bases
- Recognizing Brønsted-Lowry conjugate acid-conjugate base pairs
- Understanding the autoionization of water and the significance of K_w
- Understanding the differences between acidic, neutral, and basic aqueous media
- Understanding how to use pX scales (pH, pOH, pK) by going between X and pX values
- Understanding the differences between strong and weak acids; strong and weak bases
- Understanding the relationship between K_a for an acid and K_b for its conjugate base

- Using K_a and K_b values to evaluate relative strengths of aqueous acids and bases
- Using K_a and K_b values to estimate/calculate pH values of aqueous acids and bases
- Understanding the difference between monoprotic and polyprotic acids
- Understanding trends in acidity of oxoacids
- Understanding periodic trends in Brønsted-Lowry acid strengths
- Understanding the Lewis definition of acids and bases

Additional Aspects of Aqueous Equilibria – more acid/base chemistry (Ch. 15 & 16)

- Understanding how the common-ion effect affects equilibrium concentrations of species
- Understanding the two important characteristics of buffers: pH and capacity
- Being able to calculate the pH of a buffer solution
- Understanding different approaches to making a buffer
- Understanding the qualitative nature of acid-base titration curves
- Understanding the differences between strong acids (bases) and weak acids (bases) when titrated with strong bases (acids)
- Identifying the equivalence point on an acid-base titration curve
- Understand the difference between solubility and solubility product

Chemical Thermodynamics (Ch. 17)

- Understanding what makes a reaction or process spontaneous and to be at equilibrium
- Understanding the second law of thermodynamics regarding $\Delta S_{\text{universe}}$
- Understanding the third law of thermodynamics regarding $S^\circ(T)$
- Estimating signs of entropy changes for chemical reactions
- Evaluating entropy changes for chemical reactions using standard entropy values
- Understanding how entropy values for substances vary with molecular mass and structure
- Understanding the Gibbs free energy change for any type of process
- Understanding how to relate Gibbs free energy with enthalpy and entropy
- Evaluating standard Gibbs free energy differences for reactions using standard Gibbs free energies of formation
- Assessing temperature ranges for spontaneous processes using Gibbs free energies
- Relating standard Gibbs free energy to equilibrium constant
- Relating the Gibbs free energy to the reaction quotient

Electrochemistry (Ch. 18)

- Assigning oxidation states to elements in compounds and ions
- Balancing redox reactions in acidic media
- Identifying oxidizing and reducing agents in redox reactions
- Constructing a Galvanic cell and identifying cathode, anode, direction of electron flow, direction of ion flow in the salt bridge, the half-reactions in each half-cell, and the electrolytic solutions
- Evaluating the standard emf of a redox reaction using standard reduction potentials
- Identifying strong or weak oxidizing or reducing agents from standard reduction potentials
- Understanding how standard emf and standard Gibbs free energy are related
- Understanding the standard reduction potentials involving water under standard acidic and basic conditions
- Understanding the fundamentals of electrolysis
- Understanding the minimum potential needed to electrolyze water
- Identifying the half-reactions occurring at the electrodes during water electrolysis

- Understanding overpotential and its impact on electrolysis products
- Evaluating stoichiometric data from current and time in an electrolysis process

Nuclear Chemistry (Ch. 19)

- Understanding symbols of nuclides: numbers of neutrons and protons
 - Identifying the major types of radioactive decay “particles”
 - Understanding how to balance radioactive decay processes
 - Recognizing factors contributing to stability of nuclides
 - Understanding the meaning of binding energy of a nuclide
 - Using first-order kinetics to solve problems in radioactive decay
 - Recognizing the difference between fusion and fission
 - Identifying some biological effects of radioactivity
 - Identifying the role of ISU in the Manhattan Project
- eutrophication

Dates	Textbook Chapter Coverage	Tests and Assignments Timing
Jan 16 - 20	Ch. 10: Intermolecular forces:	Introductory OWL
Jan 23 - 27	Ch. 10: Intermolecular forces: Ch. 11: Solutions	TopHat starts to count
Jan 29 – Feb 3	Ch. 11: Solutions Ch. 12: Kinetics	Chapters 10-11 OWL
Feb 6 – Feb 10	Ch. 12: Kinetics	Chapter 12 OWL
Feb 13 – Feb 17	Ch. 13: Chemical Equilibrium	Test 1, in class Feb 13, - Topics from Chapters 10-12
Feb 20 – Feb 24	Ch. 13: Equilibrium	
Feb 27 – Mar 3	Ch. 14: Acid-Base equilibrium	Paper due at 5:00 PM, Mar 1
Mar 6 – Mar 10	Ch. 14: Acid-Base equilibrium	
Mar 13 – Mar 17	Spring Break	
Mar 20 – Mar 24	Ch. 15: More acid-base equilibrium	Test 2, in class Mar 22, - Topics from Chapters 13-14
Mar 27 – Mar 31	Ch. 15: More acid-base equilibrium	
Apr 3 – Apr 7	Ch. 16: Solubility equilibrium	
Apr 10 – Apr 14	Ch. 17: Thermodynamics	
Apr 17 – Apr 21	Ch. 17: Thermodynamics	Test 3, in class Apr 19, - Topics from Chapters 15-17
Apr 24 – Apr 28	Ch. 18: Electrochemistry	
May 1 – May 5	Ch. 18: Electrochemistry Ch. 19: Nuclear Chemistry	
May 8 - 11	Final Exam: A 2-hour comprehensive final exam will be scheduled as a group final sometime during the week of May 6 -10 . The time will be announced by the Registrar in late September or early October. Do not make travel arrangements to leave for summer break or vacation prior to the end of finals week until the date and time of final exam for Chem 178 is published by the ISU Registrar's Office. To check the update click http://www.registrar.iastate.edu/students/exams/fallexams	

* Students who have three or more finals on the same calendar day may request to reschedule a final. The instructor of the course having the smallest number of students is responsible for arranging an alternate examination time for the student unless make-up exam times are available in one of the other courses. To reschedule, the student must notify the instructor prior to the last day of class before the beginning of dead week so the instructor has time to make appropriate arrangements.