

GENERAL CHEMISTRY II
Lecture Syllabus

Instructor: Pritha Roy
Lecture: TBD
Office Hrs: TBD
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Required Items:

- *Textbook: Silberberg & Amateis (2015) Chemistry: The Molecular Nature of Matter and Change, 7th Edition, McGraw-Hill*
- *MGH Connect subscription for online homework*
- *i>clicker (handset) for in-class quizzes*

Recommended Items:

- *Workbook: Preparing for your ACS examination in general chemistry. The official guide. American Chemical Society, ISBN 0-9708042-0-2*
- *Student's Solutions Manual to Accompany Principles of General Chemistry, Martin Silberberg, ISBN 978-0-07-322664-4*

I. Spring 2017 Tentative Schedule

Week of	Text Chapter	Topic
	13	Intro, Solutions and Colloids
	13	Solutions and Colloids
	16	Rates of Reaction
	16	Rates of Reaction
	17	Chemical Equilibrium
	Exam I	Ch. 13, 16, 17 (TBD)
	17	Chemical Equilibrium
	18	Acids and Bases
	18	Acids and Bases
	SPRING BREAK	CLASSES DO NOT MEET
	19	Ionic Equilibria in Aqueous Systems
	12	Intermolecular Forces: Liquids, Solids, and Phase Changes

	Exam II	Ch. 17, 18, 19, 12 (TBD)
	20	Thermodynamics and Equilibrium
	21	Electrochemistry
	21	Electrochemistry
	Exam III	Ch. 12, 20, 21, 23 (TBD)
	23	Transition Metal Chemistry
	15	Organic Chemistry
	24	Nuclear Chemistry
	LAST DAY OF CLASS	
	FINAL EXAM	ACS Comprehensive Exam; Exam begins promptly at ; no late arrivals

Spring break:

Important Dates: (last day to add); (last day to drop)

II. General Comments

This is the second of a two semester chemistry course for science majors that builds on fundamental principles mastered in the first semester of the course. A passing grade of at least "C" should have been earned in CHEM 211 & CHEM 213 before enrolling in this course. **If you register for this course and have not successfully completed the prerequisites, you will be DROPPED from the class. The material covered in the first semester course (lecture and lab) is necessary to pass this course. Therefore, simultaneous enrollment in the courses will not be allowed.** *A review of CHEM 211 concepts (mathematical operations, trends in the periodic table, laboratory experiments, nomenclature, Lewis Octet Rule, balancing equations, redox reactions) should take place **before the first class meeting.***

Please feel free to discuss any aspect of the course with me during office hours or during a scheduled appointment. Do not expect to dominate the entire period reserved for office hours and be considerate of others when you do show up for office hours. If you are unable to attend office hours due to time conflicts, make sure you attend posted office hours of your lab instructor or another Graduate Teaching Assistant (GTA) or the class Learning Assistant (LA). An additional aid provided by the Chemistry Department is the tutoring center (basement level of Planetary Hall), which is open during the week and staffed by students who have been successful in the subject matter. Students enrolled in CHEM 212 are not required to pay additional costs to utilize the resources provided by the tutoring center; this is a cost free aid provided to students enrolled in the General Chemistry courses. Periodically [announcements](#) concerning the tutoring center and all General Chem sections will be posted electronically. To maximize your performance in the course requires daily practice and class attendance. **Attendance on the first day of class is critical if you intend to get started on the right track (students not present when the roll is called will be dropped from the class---lecture and lab simultaneously).** If you honestly do not have the time or inclination to work at chemistry daily and attend **ALL** of the scheduled classes, **DROP NOW** and save the tuition.

Positive classroom participation will be considered during tabulation of final grades, with the firm expectation that all aspects of the class will be conducted with civility and respect for differing ideas, perspectives, and traditions.

Students should come to class prepared to work problems on the board. Paced learning, rather than last minute cramming, will prove beneficial to your performance in the lecture and laboratory portions of this course. "All-night cram sessions" and doing just enough to hopefully get by are the primary reasons for the high "F" rate in chemistry.

The successful student will make use of the many learning aids available: discussions, study groups and work sessions with fellow students, actively participating in class, working textbook problems, and completing online homework assignments. Keep in mind that lecture is a learning aid used to clarify concepts and does not control how much you learn---you do. Your textbook also lists a very useful study aid that may be accessed via the internet.

Students enrolled in this course must activate their GMU email accounts to receive important University information, including messages related to this class. I will only reply to email received from students using their GMU email accounts.

III. Midterms, Homework, and Quizzes

General Remarks: Cell phones, pagers, iPods, communication devices, etc. should be turned off BEFORE class begins. Failure to do so will result in your removal from the classroom.

Grading:

- The final grade in this course will be based on a percentage of points earned relative to total possible points. Listed below is the tentative point distribution for examinations, quizzes/homework assignments, and class participation. However, an absolute grading scale cannot be determined until all scores have been compiled and evaluated. In order to optimize your overall performance use the following scale as a rule of thumb: 100-90% (A); 89-80% (B); 79-70% (C); <69% (D or F). DO NOT RELY UPON A "CURVE"; MAXIMIZE YOUR OVERALL PERFORMANCE IRRESPECTIVE OF A "CURVE".
- George Mason University does not dictate a grading scale. Instructors may determine cut off points for A, B, C, etc. The use of plus and minus grades for A, B, C is also at the instructor's discretion.
- "Grading on a curve" is not mandatory. True letter grades cannot be assigned to exams during the course of the semester because students at the bottom tend to drop or withdraw from the class, thereby resulting in a shift of the average for the exam. Students that withdrew from the course, as well as those that stopped attending, will not be considered in the calculation of the overall average for the course at the end of the semester.
- Extra credit work and/or assignments will not be entertained at the end of the semester because students failed to properly manage their time.

Hourly Exams (3)	45%
LA Diagnostic Exams (2)	10%
Quizzes, HW, in-class	20%
Final Exam (lecture)	25%
Total	100%

Hourly exams:

A valid GMU ID is required for all exams. Other forms of ID will not be accepted. GMU ID cards that do not clearly show the face and identification number will not be accepted. Presentation of an ID card after your Scan-Tron form has been turned in and you exit the examination area will not be accepted for the exam(s).

- Students are responsible for providing their own calculators, pencils, erasers, and Scan-Tron forms for examinations. You should be very familiar with your calculator prior to exam dates. **PROGRAMMABLE CALCULATORS WILL NOT BE ALLOWED DURING QUIZ and EXAMINATION PERIODS. CALCULATOR SHARING WILL NOT BE ALLOWED DURING TESTING PERIODS.** Small computers are also not allowed during examination periods. Use of such devices will be considered an honor code violation and dealt with accordingly. Three exams (samples of old exams are posted on Blackboard) and a final cumulative exam will be given during the semester. ACS study guides for the final exam can be purchased from the GMU Bookstore or ordered online from the American Chemical Society (ACS). All exam scores will be used in determining the final grade. Makeup exams will not be given. It is your responsibility to schedule your plane/train travel around the listed exam dates and times.

- ALL cell phones and communication devices are to be turned off, properly secured and stored away BEFORE the exams begin. If I find (see or hear) a cell phone on a student during an exam, the student will receive an automatic "F" for the exam, since this is an honor code violation and the matter referred to the [Office of Academic Integrity](#). The recommendation will be for the student to receive a grade of "F" for the entire course. If another student observes the violation or has knowledge of the offense, yet fails to report it, he/she may also be accused of violating the honor code. Students should not place themselves in a position that appears to support collusion in the honor code violation activity. All parties will be referred to the honor committee with sanctions levied based on the number of offenses and judgements determined by the honor committee. Keep in mind at all times that GMU is an Honor Code university.

- Any form of cheating on the final exam will result in an automatic "F" for the course. The standard recommendation for honor code violations will be prosecution to the fullest extent.

- Recommendations regarding honor code violations (HCV) on hourly exams.....first time offenders---a grade of "F" for the hourly exam; repeat offenders--a grade of "F" for the course and suspension/expulsion from George Mason University.

- Recommendations regarding honor code violations (HCV) on the final exam.....first time offenders---a grade of "F" for the course and suspension/expulsion from George Mason University.

- Final Exam: The final exam is a standardized exam, cumulative in nature, that covers concepts from the CHEM 212 semester. If you purchased a study guide for the ACS examination for CHEM 211 you do not need to purchase another one.

- ***PROGRAMMABLE CALCULATORS WILL NOT BE ALLOWED FOR THE FINAL EXAM.*** *It is your responsibility to secure a basic non-programmable calculator and familiarize yourself with it prior to the final exam period. No exceptions will be made for the final examination.*

- *The final examination can only be rescheduled by the COS Assistant Dean.*

Exam policy

Quizzes:

In-class quizzes will be administered during the semester. The unannounced quizzes are not optional/extra credit work and count toward your final grade. Students should always come to class prepared.

Lecture evaluations will be based, in part, on three equally weighted midterm exams given during the semester and one comprehensive final exam. No test scores will be dropped when determining the final grade. Also, there are no make up exams (no exceptions) given in this course. If one exam is missed, for any reason, then the point values of the other exams will be increased proportionately to cover the missed exam. This will only be done for ONE excused absence. An absence will be excused ONLY if the student provided the instructor with adequate documentation (in writing) covering the excuse (e.g., note from a physician) and contacts the instructor immediately upon knowing the exam will be missed. Excuses such as a mild sickness or car troubles will not be

accepted. More than one excused absence from an exam will result in a zero score on the second missed exam. Any non-excused absence will result in a zero score for the exam. The final exam is cumulative and based on the American Chemical Society (SCS) standardized test. The ACS workbook is a recommended **preparatory aid for the final**. **Any attempt to change the time of the final must be authorized by the course instructor and rescheduled by the COS Assistant Dean** prior to Exam III. **Absence with failure to obtain authorization in advance will result in forfeiture of the final exam score.**

Graded Homework: There will be computer-graded homework (HW) assignments throughout the semester, which are available through Blackboard. The online HW counts as part of the overall grade. You must complete the HW assignments before the assigned deadlines posted below to receive full credit. All deadlines on the dates shown below are at 12:00 pm (noon).

Chapter	Deadline	Chapter	Deadline
13		12, 19b	
16		20	
17		21	
18		23	
19a		24	

Quizzes: i>Clicker quizzes will be given during most of the lecture periods. The quizzes reflect current subject material, often on topics covered the same day in lecture. Reading the text ahead of the lecture schedule is imperative for success on quizzes.

VI. Exam Preparation

You will be learning chemistry and how to develop critical problem solving skills in this course. Adequate preparation is an integral part of the learning process and is essential to achieving success in Chem 212, and the online homework is required. Homework is recommended for sharpening students' problem solving skills and for preparation for exams. Answers to end-of-chapter homework problems are located in the back of your textbook (for selected problems). You may use the student solution manual to look up solutions to problems as well. You should obtain a separate notebook for working out homework problems and you need to bring this notebook to the instructor or tutor when you are seeking help. Success in chemistry 211 may be aided by following these steps.

1. Lecture notes are to be taken by students while lecture is in progress.
2. Powerpoint slides may or may not be used.
3. **Copies of lecture material covered will not be uploaded to Blackboard.**
4. If you miss lecture, or arrive late, you will need to get the information from a classmate.
5. It is the student's responsibility to attend lecture and take notes.
6. Exams are not multiple choice only. You cannot simply GUESS your way through this course.
7. During each hourly exam, students will be expected to **solve problems and show all work** necessary, in an organized manner, to support the final answer that is shown.
8. Before lecture read the assigned pages from the textbook.
9. Complete the Learn Smart exercise in Connect.
10. Prepare for the in-class quiz questions.
11. Complete the online Connect HW after class. Repeat as needed.
12. Practice midterms are available through Connect that follow the format of the in class exams.
13. This is critical preparation for the exam.
14. For each problem you miss, return to the textbook to refresh yourself on the subject theory and refer back to an in-chapter example problem related to the missed question.

VII. Additional Information

ACADEMIC INTEGRITY

Mason is an Honor Code university; please see the University Catalog for a full description of the code and the

honor committee process. The principle of academic integrity is taken very seriously and violations are treated gravely. Academic integrity in this course means any sharing of information or obtaining or providing assistance on any written assignment unless authorized by the instructor. Another aspect of academic integrity is the free play of ideas. Vigorous discussion and debate are encouraged in this course, with the firm expectation that all aspects of the class will be conducted with civility and respect for differing ideas, perspectives, and traditions. When in doubt (of any kind) please ask for guidance and clarification.

MASON EMAIL ACCOUNTS

Students must use their MasonLive email account to receive important University information, including messages related to this class. See <http://masonlive.gmu.edu/> for more information.

OFFICE OF DISABILITY SERVICES

If you are a student with a disability and you need academic accommodations, please see me and contact the Office of Disability Services (ODS) at 993-2474. All academic accommodations must be arranged through the ODS.

<http://ds.gmu.edu/>

OTHER USEFUL CAMPUS RESOURCES:

WRITING CENTER: A114 Robinson Hall; (703) 993-1200; <http://writingcenter.gmu.edu/>

UNIVERSITY LIBRARIES "Ask a Librarian" <http://library.gmu.edu/ask>

COUNSELING AND PSYCHOLOGICAL SERVICES (CAPS): (703) 993-2380; <http://caps.gmu.edu>

UNIVERSITY POLICIES

The University Catalog, <http://catalog.gmu.edu>, is the central resource for university policies affecting student, faculty, and staff conduct in university academic affairs. Other policies are available at

<http://universitypolicy.gmu.edu/>. All members of the university community are responsible for knowing and following established policies.