

## Chemistry 211-002

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General Chemistry 211	Office: Planetary Hall, Rm 361
<b>Required Textbook:</b> <u>Chemistry: The Molecular Nature of Matter and Change</u> , 7 <sup>th</sup> Edition, by Martin Silberberg and Patricia Amateis (Details given below)	
<b>Recommended Workbook:</b> <u>Preparing for your ACS Examination in General Chemistry: The Official Guide</u> , American Chemical Society, ISBN 0-9708042-0-2	

**NOTE:** Students must simultaneously register for CHEM 211-lecture and CHEM 213-laboratory or they will be administratively dropped by the department.

**Students must earn a minimum grade of "C" in CHEM 211 and CHEM 213 in order to advance to CHEM 212 and CHEM 214---**no exceptions.

**COURSE DESCRIPTION:** This is the first of a two-semester general chemistry course sequence for science majors and pre-professional students. The course curriculum is designed to allow students to learn the fundamental and basic concepts of chemistry. I hope you find this course enjoyable even if it appears difficult. Please feel free to discuss any aspect of the course with me during office hours.

**STRATEGIES FOR SUCCESS:** Chemistry is a subject, which requires dedication and a great deal of practice to grasp the concepts. For each hour in class, you can expect to spend 3-4 hours out of class reading, completing homework, reviewing notes and preparing for exams. Lecture topics have been scheduled for the entire semester; you will benefit by reviewing the appropriate material before coming to lecture, which you are expected to attend on a regular basis. Be prepared to **devote about 10 hrs./wk. toward studying and practicing the material. Keep distractions to a minimum** during your chemistry studying time. **Struggle with the homework** before asking for help. With this kind of dedication, you can expect to grasp the concepts comfortably, and even master it.

**HOMEWORK:** Homework is assigned and graded online via McGraw-Hill Connect. You are encouraged to keep up with the pace of the class by working on problems after each lecture. Connect is designed to assist you with your coursework based on your needs. Any significant changes will be announced via Blackboard. All students must use GMU email accounts for Connect login/profiles. The GMU email account must be used for all GMU related matters.

### TEXTBOOK REQUIREMENTS

For this course you will be required to purchase McGraw-Hill Education Connect® **Chemistry: The Molecular Nature of Matter and Change** by Silberberg, 7<sup>th</sup> edition. Even though you are not required to have a print text, please be aware that if you purchase a used textbook you will still need to purchase a Connect access code in order to access the online homework assignments.

Please check Blackboard for all relevant information to procure the required course material.

**I>CLICKER QUIZZES:** In-class chapter quizzes will be given after each chapter as well as, at random.

Students must purchase or rent the i>clickers (personal response devices) and *bring it to every class* to record the individual answers to the quizzes. The i>clicker automatically records your answers to each quiz. *If you do not have an i>clicker, you will not be able to complete the quiz. A registered i>clicker is linked to one student. You may not borrow your classmate's device to answer the quiz. You may not use your smart phones as clicker devices. Using another student's i>clicker or your smart phone as a clicker device will be considered an honor code violation and, as such, will be reported to the Office of Academic Integrity for further actions.*

**MIDTERM EXAMINATIONS:** The hourly exams, also referred to as midterm exams will be taken in the testing center (basement level of Planetary Hall). Three (3) computerized exams will be administered during the course of the semester. Each exam will consist of twenty (20) questions that must be completed within the allotted time of 80 minutes. A practice exam program can be found under the Connect platform and at <http://genchem.cos.gmu/PracExam>

**FINAL EXAMINATION:** The final examination is cumulative and will be a nationally standardized examination produced by the American Chemical Society (ACS). ACS study guides are available in the library and bookstore.

**CALCULATORS:** A scientific calculator capable of scientific notation, base-10 and natural logarithms is required and should be brought to every class. A 2-line display, such as in the TI-30X IIS from Texas Instruments, is recommended. No graphing calculators or those with extended memory are allowed. No small computers or programmable calculators and sharing of calculators is allowed during exams. Use of a programmable calculator or small computer and sharing will be considered an *honor code violation*.

**GRADING:** A student who finds it necessary to miss an examination must notify me as soon as possible before or immediately after the examination and bring in documented proof of the problem. Otherwise, the student will receive a zero for the missed examination. There will be no make-up exams for unexcused absences.

Students who have more than one final examination scheduled at the same time should bring proof of the conflict before it can be rescheduled.

The final grade in this course will be based on a percentage of points earned relative to total possible points. Listed below is the percentage breakdown for homework, quizzes, hourly exams and the final exam. 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 for **final grades for the course:** 100-90% (A); 89-80% (B); 79-70% (C); <69% (D or F).

	Percentage
Homework	20 %
Quizzes	15 %
Midterm Exams	40 %
Final Exam	25 %
Total	100 %

**Class Format and Policy:**

- LearnSmart study modules have been created and assigned on Blackboard/McGraw-Hill Connect. These modules are to be completed prior to completion of chapter lecture to get credit.
- I>clicker quizzes are to be taken in silence, i.e. no talking with your classmates.

- Students must use their MasonLive email account to receive important University information, including communications related to this class. I will not respond to messages sent from or send messages to a non-Mason email address.

**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. HONOR CODE MATTERS: For a complete description of GMU Honor Code, follow this link:*

<http://oai.gmu.edu/wp-content/uploads/2015/07/Honor-Code-Final-2015-16.pdf>

- *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, the observer 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.*
- *If you are caught cheating during an exam, the matter will be referred to the Honor Committee with recommendation of prosecution to the fullest extent.*

## **EMERGENCY**

In the event that there is a bomb scare or other emergency, class will not necessarily be cancelled. Instead, all members of the class should assemble outside the front entrance to the building in the designated location until such time that the class has been officially dismissed. Students that leave prior to class being officially dismissed, in the event that the emergency is cleared and lecture resumes, will receive a zero for missed work.

## **Disability**

If you are a student with a disability and you need academic accommodations, please see me and contact Disability Services at 703-993-2474, <http://ods.gmu.edu> . All academic accommodations must be arranged through Disability Services.

**Feedback:** During the course of the semester, we would appreciate constructive feedback on what you feel we could do differently to help you learn the material better. With the correct commitment and strategy for learning, everyone can pass and even do well in the class.

### Tentative Schedule

Week #	Chapter	Topic
1	1	Introduction Measurements, Units, Precision, Problem Solving
2	2	Components of Matter (Atoms, Molecules and Ions),
3	3	Stoichiometry & Chemical Equations
	1-3	<b><i>Mid-Term Exam I (Testing Center)</i></b>
4	4	Chemical Reactions
6	5	Gas and Kinetic-Molecular Theory
7	6	Thermochemistry
	4-6	<b><i>Mid-Term Exam II (Testing Center)</i></b>
8	7	Quantum Theory and Atomic Structure
9	8	Electron Configuration & Chemical Periodicity
10	9	Chemical Bonding
11	10	Shapes of Molecules
	7 - 9	<b><i>Mid-Term Exam III (Testing Center)</i></b>
12	11	Theories of Covalent Bonding
	1 - 11	<b>ACS Final Exam</b>