CHE 109: Honors General Chemistry Fall 2017

GENERAL COURSE INFORMATION

Instructor

Professor Robert Doyle
Office: 2-016B Center for Science and Technology
Office Hours: By appointment, schedule via e-mail.
Email: rpdoyle@syr.edu
Website: http://blackboard.syr.edu (CHE.109)

Co-requisite: CHE 129 – Honors General Chemistry laboratory. Please be aware that the grades for the lab are completely independent from those of lecture. The CHE 129 laboratory will begin in the first week of classes and is overseen by Professor Matthew Maye (mmmaye@syr.edu). All questions related to CHE 129 should be addressed to Prof. Maye.

Course Description

This course concentrates on the fundamental principles and laws underlying chemical action, states of matter, atomic and molecular structure, chemical bonding, stoichiometry, properties of solutions, chemical equilibrium, and introductory thermodynamics.

Class Times and Locations

Lectures: Tuesday and Thursday 12.30-1.50 pm
Center for Science and Technology 1-019 (CST 1-019)
Note: CST is also sometimes noted as SciTech

Recitation Hours:

Tu., 8:00-8:55 a.m., 200 Life Science Building (LSB)
Th., 5:00-5:55 p.m., 100 Life Science Building (LSB)

Textbook and Supporting Materials (ALL AVAILABLE AT THE SU BOOKSTORE)

- Chemistry, The Central Science, 13th ed. by Brown, LeMay, Bursten, Murphy, Woodward and Stoltzfus
- Student's Guide, 13th ed. (Pearson- c2015)
- MasteringChemistry: Login in through blackboard (http://blackboard.syr.edu) as described in the last page of this syllabus

NOTE: The 12th Edition on this text-book is sufficient to both study for this class and to do the homework assignments on masteringchemistry. You would still need to purchase a masteringchemistry code, however. See last page of this syllabus for registering for masteringchemistry regardless of whether you purchase the book or what edition of the book you purchase.

APPROXIMATE LECTURE SCHEDULE

The following schedule of classes lists the topics that will be covered on a particular date along with the relevant reading in the textbook. Complete the reading before the scheduled lecture time since it will make the lecture much easier to follow. Copies of the lecture notes will be put on the course web site.

DATE	TOPIC	TEXT READING (Chapter)
Tue. August 29	Syllabus/Course Overview	Syllabus
Thur. August 31	Introduction to Chemistry/Math Skills	Chap 1
Tue. Sept. 5	Math Skills/Measurement	Chap 1
Thur. Sept. 7	Math Skills/Measurement	Chap 1
Tue. Sept. 12	Atomic Theory & Structure, Periodic Table	Chap 2
Thur. Sept. 14	Molecules, Ions, Compounds	Chap 2
Tue. Sept. 19	Chemical Formulas, Reactions, Stoichiometry	Chap 3
Thur. Sept. 21	Mass, Moles	Chap 3
Tue. Sept. 26	Limiting Reactant; Yields	Chap 3
Thur. Sept. 28	Ions/Precipitation and Acid-Base Reactions	Chap 4
Tue. Oct. 3	**FIRST EXAMINATION**	**Chapters 1,2,3 only**
Thur. Oct. 5	Oxidation - Reduction Reactions, Solutions	Chap 4
Tue. Oct. 10	Thermochemistry	Chap 5
Thur. Oct. 12	Thermochemistry	Chap 5
Tue. Oct. 17	Light Waves, Photons	Chap 6
Thur. Oct. 19	Bohr, Quantum Mechanics	Chap 6
Tue. Oct. 24	Electron Configurations, Pauli Principle	Chap 6
Thur. Oct. 26	**SECOND EXAMINATION**	**Chapters 4,5,6 only**
Tue. Oct. 31	Periodicity, Effective Charge	Chap 7
Thur. Nov. 2	Ionization Energy	Chap 7
Tue. Nov. 7	Metals, Nonmetals, Metalloids	Chap 7
Thur. Nov. 9	Ionic and Covalent Bonds, Polarity	Chap 8

Tue. Nov. 14	Lewis Structures, Resonance	Chap 8
Thur. Nov. 16	Molecular Shapes, VSEPR Model, Polarity	Chap 9
Tue. Nov. 21	THANKSGIVING (NO CLASS)	-
Thur. Nov. 23	THANKSGIVING (NO CLASS)	-
Tue. Nov 28	Hybrid Orbitals, Molecular Orbitals	Chap 9
Thur. Nov. 30	**Third Examination**	**Chaps 7,8,9 only**
Tue. Dec 5	Gas Laws	Chapter 10
Thur. Dec 7	Open- as needed	Follow Blackboard and class for instructions
Fri. December 15th	**CUMULATIVE FINAL EXAMINATION 3.00-5.00 CST 1-019**	**Chapters 1-10**

RECITATIONS

Each week in recitation, students will have the opportunity to ask questions about any topic they are having trouble with or about the homework exercises due that week.
Recitations are designed to help you learn the material and answer particular questions that you may have. They are run as question and answer sessions and are in no way intended to replace the regular lecture. Attendance is not mandatory and will not be recorded.

Please note that the assigned homework is NOT due in recitation. All homework must be performed and submitted through Blackboard linked to 'MasteringChemistry'. See the assignments for specific due dates and times. No exceptions.
Course Name: Course Name: CHE109DOYLE

TA for the course is Jeremy Scher (jascher@syr.edu)

NOTE: The CHE 109 (General Chemistry *Lecture*) Instructor (Prof. Doyle) and TA have **NO** connection to the CHE 129 (*Laboratory*) course in any way. CHE 129 is taught and graded totally separately from CHE 109. If you have questions regarding CHE 129, you must contact the CHE 129 Instructor Prof. Matthew Maye (mmmaye@syr.edu).

Mastering Chemistry and Recitiation

The following is a schedule of material that will be discussed in the recitations and the homework that is due on the MasteringChemistry website organized by week. The textbook contains the answers to the odd-numbered problems. The Solutions Manual contains detailed solutions to these problems and several copies are held on reserve in the Science and Technology Library (Carnegie Library Building). If you are having difficulty, refer to the Solutions Manual and Students Guide to support your learning.

ALL homework and Tutorials are to be done and turned in online through blackboard (using masteringchemistry). No exceptions.

Course Name: CHE109.M001

The MasteringChemistry **tutorials** are **mandatory** and they are **graded.** It is highly recommended that you complete the Tutorial for a chapter BEFORE attempting the Homework for that chapter since the Tutorials are designed to help prepare you for the Homework problems.

Technical help is available at:
Mastering Support: http://www.masteringsupport.com/
Mastering Student Support: 1-877-672-6877, Mon-Fri 12 Noon – 8 PM EST

Recitation hours will be run by TA Jeremy Scher and held:
Tu., 8:00-8:55 a.m., 200 Life Science Building (LSB)
Th., 5:00-5:55 p.m., 100 LSB

Getting help: There are multiple ways to get help, such as coming to me or to go to the CHE 109 *or* CHE 129 Recitation *or* TA's office hours (check schedule or email TA directly for office hours or to schedule an appointment). You can also get help at recitation sections as noted above.

Recitations: Recitation section M002 will meet on Tuesday, 8:00-8:55 a.m. in Life Science Building 200 and section M003 will meet on Thursday, 5:00-5:55 p.m. in Life Science Building 100. Recitation classes are optional and you can attend either one, regardless of the section you are officially assigned.

COURSE GRADING

Academic Honesty (from http://academicintegrity.syr.edu)
Complete academic honesty is expected of all students. Any incidence of academic dishonesty, as defined by the Syracuse University Academic Integrity Policy (http://academicintegrity.syr.edu), will result in both course sanctions and formal notification of the College of Arts & Sciences. In this course, students are allowed and strongly encouraged to study together, but exams and online problem sets must represent the work of the individual student. Online problem sets must be completed by each student using his or her own access account, though reference to the text and lecture notes is allowed.

Attendance
Attendance will not be followed but you should make every effort to attend all lectures.
For examinations, only written prearranged absences (discussed with Prof. Doyle PRIOR to the exam) or medical absences will be excused. In the latter case this will be based only on **written advice** from the Health Center or a health-care provider (based upon clinical findings and prescribed treatment recommendations). **NO VERBAL EXCUSES WILL BE ACCEPTED.** The medical document must specifically indicate that you were unable to attend the specific exam date and time. All such absences will be verified by Chemistry Department staff.

THERE WILL BE NO MAKEUP EXAMINATIONS EXCEPT IN THE CASE OF APPROVED ABSENCES.

FAITH TRADITION OBSERVANCES

SU's religious observances policy, found at http://supolicies.syr.edu/emp_ben/religious_observance.htm, recognizes the diversity of faiths represented among the campus community and protects the rights of students, faculty, and staff to observe religious holy days according to their tradition. Under the policy, students are provided an opportunity to make up any examination, study, or work requirements that may be missed due to a religious observance provided they notify their instructors no later than the end of the second week of classes. Student deadlines are posted in My Slice under Student Services/Enrollment/My Religious Observances/Add a Notification. Students will have access to an online notification form through MySlice for two weeks beginning on the first day of class .

DISABILITY STATEMENT

If you believe that you need accommodations for a disability, please contact the Office of Disability Services (ODS), http://disabilityservices.syr.edu, located at 804 University Avenue, room 309, or call 315-443-4498 for an appointment to discuss your needs and the process for requesting accommodations. ODS is responsible for coordinating disability-related accommodations and will issue "Accommodation Authorization Letters" to students with documented disabilities as appropriate. Since accommodations may require early planning and generally are not provided retroactively, please contact ODS as soon as possible. Our community values diversity and seeks to promote meaningful access to educational opportunities for all students. Syracuse University and I are committed to your success and to supporting Section 504 of the Rehabilitation Act of 1973 as amended and the Americans with Disabilities Act (1990). This means that in general no individual who is otherwise qualified shall be excluded from participation in, be denied benefits of, or be subjected to discrimination under any program or activity, solely by reason of having a disability.

Exams

Exams will cover both material covered in lecture and the assigned text readings. Some questions will come from lecture (not covered in text) and others from the text (not covered in lecture). Many questions will be problems similar to assigned homework exercises. Lots of practice with problems is the key to success in this course. Each hourly exam will focus on specific chapters. The final exam will cover the entire semester. Practice exams will be provided at lecture
Regular exams (NOT the Final) are given during the regular class period and location and are scheduled as follows:

First Examination	**Tuesday, October 3rd 12.30-1.50 CST1-019**
Second Examination	**Thursday, October 26th 12.30-1.50 CST 1-019**
Third Examination	**Thursday, November 30th 12.30-1.50 CST 1-019**
FINAL EXAMINATION	**Friday, DECEMBER 15th 3.00-5.00 pm CST 1-019**

The final grade will be computed using the following items and weightings:

Three, In-Class Hourly Exams (20% each)		60%
Cumulative Final Exam		30%
MasteringChemistry Online Homework		10%
	Course Total:	100%

The equation to calculate your overall course raw score percentage is:

(Exam #1 %)*0.2 + (Exam #2 %)*0.2 + (Exam #3 %)*0.2 + (Final Exam %)*0.3 + (Homework %)*0.1 = Overall %

Grade ranges based upon raw score percentages:

	A = ≥90%	A- = 88-89%
B+ = 85-87%	B = 80-84%	B- = 75-79%
C+ = 70-74%	C = 60-69%	C- = 55-59%
	D = 45-54%	
	F = <45%	

Enter your Blackboard course

1. Sign in to Blackboard and enter your Blackboard course.
2. Do one of the following:
   - ➢ Select any Pearson link in the Content area.
   - ➢ Select **Tools** in the left navigation and **Pearson's MyLab & Mastering** on the Tools page. Next, select any course link in the top area of the Pearson's MyLab & Mastering Tools page.

Get access to your Pearson course content

1. Enter your Pearson account **username** and **password** to **Link Accounts.**
   You have an account if you have ever used a Pearson MyLab & Mastering product, such as MyMathLab, MyITLab, MySpanishLab, MasteringBiology or MasteringPhysics.
   - ➢ If you don't have a Pearson account, select **Create** and follow the instructions.
2. Select an access option:
   - ➢ Enter the access code that came with your textbook or was purchased separately from the bookstore.
   - ➢ Buy access using a credit card or PayPal account.
   - ➢ If available, get temporary access by selecting the link near the bottom of the page.
3. From the You're Done page, select **Go to My Courses.**

Note: We recommend you always enter your MyLab & Modified Mastering course through Blackboard.

Get your computer ready

For the best experience, check the system requirements for your product at:
http://www.pearsonmylabandmastering.com/system-requirements/

Need help?

For help with MyLab & Modified Mastering with Blackboard, go to:
http://help.pearsoncmg.com/mylabmastering/bbi/student/en/index.html