

Chemistry 0120/0420: General Chemistry 2 Sections 1030/1020 Syllabus Spring 2019

Instructor: Dr. David Ewing

Lecture: MoWeFr 9:00 – 9:50 am

Office: 318 Chevron Science Center

150 Chevron Science Center

Contact: [dwewing@pitt.edu](mailto:dewing@pitt.edu) Email will normally be answered within 24 hours.

Office hours*: Tu 9-11, Th 12:30-2:20, and by appointment. I will also be available right outside the lecture hall after most of our classes.

*Chevron 318; call 412-383-1321 when you get to the locked doors in the hallway.

Recitation Teaching Assistants: Christian Gamboa crg66@pitt.edu (CHEM 0120)

Emily Barker efb7@pitt.edu (CHEM 0420)

Laboratory Teaching Assistants: Megan Clark men54@pitt.edu (Section 1032 - Mo eve - 114)

Miho Naruse min45@pitt.edu (Section 1031 - Tu am - 209)

Omri Abarbanal oda6@pitt.edu (Section 1034 - We eve - 117)

Emily Gifford ekg20@pitt.edu (Section 1033 - Th am -117)

Undergraduate Teaching Assistant: Christine Zaky csz5@pitt.edu

Review sessions Tu 5:00–5:50 pm in Eberly 206

Course description:

Chemistry 0110/0410 and 0120/0420 comprise a two-term introduction to the discipline. This term we will study solutions, kinetics, chemical equilibria, acid-base chemistry, thermodynamics, electrochemistry, nuclear chemistry, transition metal complexes, and we'll review some concepts from General Chemistry 1 to help you get ready for organic chemistry, i.e. Lewis structures and hybrid atomic orbitals. This corresponds to chapters 12-19, 20, 22, 9, and 10 of the textbook.

Fulfillment of General Education Requirements:

Chem 0120 (General Chemistry 2) and Chem 0420 (General Chemistry 2) each partially fulfill the Natural Science GER (General Education Requirement) which requires three courses in the Natural Sciences. For more details see the "General Education Requirements" web page maintained by *The Dietrich School of Arts & Sciences Undergraduate Studies* (<https://www.asundergrad.pitt.edu/> and select *General Education Requirements* under *The Academic Experience* tab).

Books:

General Chemistry, 11th ed., Ebbing and Gammon (Cengage Learning, 2017) - **required**

Chemistry 0120 Lab Manual 2018-2019 (University of Pittsburgh, 2018) – **required**

Student Solutions Manual for Ebbing/Gammon's General Chemistry, 11th ed., David Shinn (Cengage Learning, 2017) - **optional**

Study Guide for Ebbing/Gammon's General Chemistry, 11th ed., Larry K. Krannich (Cengage Learning, 2017) – **optional**

The optional books are also on reserve in the Chemistry Library (130 Chevron Science Center).

Electronic Resources:

CourseWeb: Course information will be posted at <https://courseweb.pitt.edu>. This will include announcements, lecture slides, in-class problems, homework assignments, your scores, the class schedule, and this syllabus. The lab has its own CourseWeb site.

Sapling Learning: Sapling is an electronic homework/learning system. For each chapter in the textbook one or more sets of electronic homework will be assigned, to be completed by the due date given. **This homework will be graded** and will count for 6.25% of your overall course grade. You will get 3 attempts at each problem/question. There is no penalty for not getting the first two attempts correct. Use the hints and/or tutorials to help you get the correct answer, if needed. There is no penalty for doing so.

There are a few quirks in the Sapling system, so it may, very occasionally, say you got the wrong answer when you in fact got it right. If you document this your grade will be adjusted. You can work with other students on homework assignments. Many people find this a good way to learn, learning from each other. You can also get help from the Instructor, your Teaching Assistants (TAs), and tutors (see below) on Sapling and textbook homework, and the recitation worksheets.

To sign up for Sapling go to the Sapling folder under Course Documents in CourseWeb, and click on the file "Register for Sapling". The cost is \$38. You will have a 14 day grace period before this fee is due.

If you're having trouble getting Sapling to work, make sure you have an up-to-date version of Flash Player. You can also try using a different Browser. The Instructor has found that Internet Explorer works well with Sapling. There is also a list of suggestions on CourseWeb in the file "Student Help", in the Sapling folder under Course Documents.

Sapling support: <https://macmillan.force.com/macmillanlearning/s/contactsupport>

Top Hat: We will use Top Hat for answering questions during lecture, graded on participation. Not every lecture will have Top Hat questions. Be sure you are registered for this course, join code 692210, no later than Monday, January 14 at 9:00 am:

<https://support.tophat.com/s/article/Student-Top-Hat-Overview-and-Getting-Started-Guide>

Other needed items:

Calculator: You will need a scientific calculator for homework, quizzes, exams, and labs. The calculator cannot connect to the web. You may not use your phone as a calculator on quizzes or exams.

Safety goggles: for lab – available in the Bookstore

Laboratory and Recitation:

There is a 4 hour per week lab period that is part of this course. The lab grade will contribute 15% to your overall course grade. You will get details about the lab at your first lab meeting. If you are retaking this course and previously earned 70% or better in the lab portion of the course, you may not have to retake the lab. You must fill out a “Credit for Lab for Repeaters” form, available in the Chemistry Undergraduate Office (Chevron 107), and turn that in at Chevron 107. If approved, your previous lab grade will be used this term in the calculation of your course grade.

You are responsible for coming to lab prepared. This includes doing the pre-lab assignments, bringing your lab manual and safety goggles. In addition, you should be dressed appropriately for lab. This means you need to wear long pants (that go past your ankles), a shirt that covers your entire torso, and shoes that completely enclose your entire foot. In other words, no skin on your torso, legs, or feet should be visible.

The first hour of each lab period will be a recitation, a time where we will review lecture topics in a small class setting. You will find it useful to bring your lecture notes to recitation. A graded quiz will be taken at the beginning of most of the recitations, as noted on the class schedule. You must attend the entire recitation to get credit for the quiz. You should also attend the recitations that do not have quizzes, to get the benefit of reviewing the material covered in lecture. **CHEM 0420 students must attend recitation.** The labs and recitations are taught by TAs.

There will be no lab on Monday, January 21, as the University is closed for Martin Luther King, Jr. Day. If you have lab that day you will be excused. You will not be required to turn anything in for that Monday lab, but you should read Experiment 3 so you have that information. There is no recitation for Ewing’s lecture January 21-24.

How to do well in this course:

To do well you should come to all lectures, recitations, and labs (if you are taking lab). What’s done in these components of the course reinforce each other. Read the textbook. Done right this is a slow process – there is a lot of information packed into a science textbook. Come prepared for lab. Do the homework, do the homework, do the homework! You can’t just look at worked out solutions to the homework problems – you must work through them. That’s how you will internalize the material. While you will need to memorize a few things, understanding the material is the goal. Trying to memorize everything won’t work well.

Ask questions when you need to. There is plenty of help available:

- Your lecture Instructor
- Your TAs
- Tutoring on the 2nd floor Chevron Balcony (FREE): You may consult anyone on duty. A schedule will be available the second or third week of class and will be posted on CourseWeb and around the building.
- Peer tutoring (FREE): See <https://asundergrad.pitt.edu/connected-community/peer-tutoring>

Most students also find it beneficial to form informal study groups.

Grading policies:

Your 7 highest quiz scores (of 8) will count toward your grade. If you miss a quiz that will be the dropped score. If you know you will miss a recitation/lab for a valid reason, or if an emergency situation caused you to miss a recitation/lab, talk to your TA. It may be possible to attend a different recitation/lab section during the same week, or otherwise make up a quiz.

There are no make-up exams. If you miss an hour exam for a valid reason your final exam grade will be prorated accordingly. If you know you will miss an exam for a valid reason, or if an emergency situation caused you to miss an exam, talk to the Instructor as soon as possible. In exceptional, documented circumstances an exam may be taken early, at the discretion of the Instructor.

If you feel something on an exam was graded incorrectly you have the option for a regrade. You must submit a Regrade Request Form, available on Courseweb, and the exam in question within one week of the graded exam being returned to you. The entire exam may be regraded, so it is possible you could end up with a lower score than you originally received.

Course grades will be determined as follows:

Hour exams	100 pts. each	= 300 pts.
Final exam (cumulative)	200	
Quizzes	100	
Laboratory	120	
Sapling homework	50	
Top Hat	30 (includes 5 pts. for completing two 10 minute surveys)	
TOTAL	800 pts.	

For CHEM 0420 students the total number of points is 680.

A+ = 97-100%	B+ = 87-89%	Similarly for the C and D ranges
A = 93-96%	B = 83-86%	
A- = 90-92%	B- = 80-82%	Minimum passing grade is 60%

Hour exams will consist of a mixture of multiple choice and short answer questions/problems. The final exam will be all multiple choice. Quizzes will vary in format.

The final exam for this class will on Wednesday, April 24, 8:00-9:50 am. The room will be announced when available.

There is no extra credit available for this course.

Other policies:

Homework from the textbook will be assigned, in addition to the Sapling homework. These will typically be all odd numbered problems in the “Practice Problems” section at the end of each chapter. Exceptions to this will be posted on CourseWeb. Textbook homework will not be graded but you should do these as well as the Sapling homework in order to master the material and do well on quizzes and exams. The assigned textbook problems have answers in the back of the book. You are also encouraged to do more, unassigned problems as time allows.

Attendance will not be taken in lecture or recitation. However, students who attend all class periods do better than they would if they did not attend. Of course, if you are not in a lecture that has Top Hat questions, you won't get those points. **Attendance in lab is required.** Please be respectful of your colleagues. There will be no talking (unless we are doing in-class problem solving), no eating, and no drinking in the lecture hall. If you have to come late or leave early, or leave during lecture, use the back door. Use of phones is prohibited.

The Instructor reserves the right to change this syllabus as needed, and will inform the class verbally and on CourseWeb of any changes.

Academic Integrity Statement: Cheating/plagiarism will not be tolerated. Students suspected of violating the University of Pittsburgh Policy on Academic Integrity will be required to participate in the outlined procedure. A minimum sanction of a zero score for the quiz or exam will be imposed. See www.cfo.pitt.edu/policies/policy/02/02-03-02.html.

Disability Resources: If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both the instructor and the Office of Disability Resources and Services as early in the semester as possible, 140 William Pitt Union at 412-648-7890 or <http://www.studentaffairs.pitt.edu/drs/>

To ensure the free and open discussion of ideas, students may not record classroom lectures, discussion and/or activities without the advance written permission of the instructor. Any such recording, properly approved in advance, is limited to the student's own private use.

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