

Emmanuel College CHM 220 Fall 2017 General Chemistry I Lecture

Professor: Dr. Juliet Hahn
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class time: Lecture MWF 9:00 – 9:50 am WSRC 105 (CHM22051)
Lecture MWF 10:00 – 10:50 am WSRC 105 (CHM22052)

(You may attend either lecture. Rate of class may be slightly different & you may miss a few points but better to attend other section than skip class. Please avoid doing this for exams.)

Lab Section 1 Thursday 12:30-2:20 pm WSRC 204 (SC220L51)
Lab Section 2 Thursday 2:30 – 4:20 pm WSRC 204 (SC220L52)
Lab Section 3 Thursday 4:30 – 6:20 pm WSRC 204 (SC220L53)

(You may make up lab in any of the sections of lab as long as there is room for you to work safely but only on the day of the experiment [preferably with prior notification to me]. Equipment and chemicals will be unavailable after the lab is complete.)

Mission Statement: “Emmanuel College is a Christ-centered liberal arts institution which strives to prepare students to become Christ-like disciples who integrate faith, learning, and living for effective careers, scholarship and service”

Course Objective: Chemistry is the science which allows control of matter by understanding matter at the molecular level. Chemistry is also the necessary foundational class to many careers. (pharmacist, medical doctor, nurse, physician’s assistant, veterinarian, engineer) A firm understanding of Chemistry will prepare students to become Christ like disciples who will go on to help make the world a better place through their disciplined hard work. For a detailed understanding of what topics will be covered in this class this semester, please view the table of contents in the first half of the textbook.

office hours: (held in either WSRC 203 or WSRC 204) Monday & Wednesday 2 to 5 pm, Tuesday 4 to 5 pm, Thursday 8 to 10:50 am and other times by appointment. (Please email me to make an appointment at times outside the posted office hour. If you need me, I will always find the time to meet with you.) I will also usually be available most days before & after my classes. I am also almost always in my office during normal business hours from 9 am to 5 pm Monday through Friday. I have a log sheet on my office door so you can tell if I have left for the day.

For the Lecture you will need access to: (a) **Textbook**, Chemistry (12th edition) by Chang and Goldsby (ISBN 9780078021510, publisher McGraw Hill Education) You will also need (b) a **scientific calculator**: To perform calculations in this course, you will need an inexpensive “scientific calculator”. It does not need to be elaborate but should be able to express numbers in scientific notation (e.g. 6.02×10^{23}) and must have log (and ln) functions. You can buy such a calculator for around \$5 to \$10.00 at the local discount store. You will be able to use your calculator on all exams. You will **not** be allowed to use a cell phone as a calculator on quizzes & exams.

Quizzes and exams (& answer keys) will be posted online at <http://JulietHahn.com> after you take the quizzes and exams. I will also post the answer key for quizzes and exams after you take the quizzes and exams on the bulletin board in Science. Please download the blank form of the quiz & work through the quiz to study for the exam. Please download the blank form of the exam & work through the exams to study for the final exam. You will **never ever** see the same question given on a quiz also on an exam. (The idea is to **understand** the questions on the quizzes & exams.) (at the exam, you will be required to leave all books, notes, cell phones in front of the room)

For the Lab you will need access to: (a) **Laboratory Manual for Principles of General Chemistry by J.A. Beran (EC Custom Text**, available only at Emmanuel College Bookstore) for background reading (b) **lab procedure handouts** which I will hand out at least one lab period prior to the lab (c) **scientific calculator** (d) **safety goggles**: Will be provided by the Science Department.

A detailed Lab syllabus will be handed out during the first day of Lab this week. Please come to your section of General Chemistry lab class this week (8/10 Thursday)

Grading: Grading will be based on a percentage of 600 total points

4 exams (100 pts per exam, drop one exam, ~1/3MC, ~1/3SA, ~1/3LA**)... 300 pts

(**MC = multiple choice, SA = short answer, LA = long answer)

final exam (**cumulative** ~1/3MC, ~1/3 SA, ~1/3 LA**) 200 pts

4 quizzes (drop 1 quiz, 25 pts each quiz, SA & LA**) 75 pts

daily **Homework In class (HI ☺)** 25 pts

(daily **HI ☺** will always be ONE question which will be open book, open notebook & open neighbor.

HI ☺ will be 50% turning in some sort of work and 50% getting the correct answer. (**Work** is defined as NOT simply rewriting the question and must show some sort of work towards the final answer but does not need to be correct.) You MUST turn in **HI ☺** in class in order for it to count. Once you walk out of the class, the **HI ☺** will NOT be accepted. You may NOT make up **HI ☺** however the lowest 30% of your **HI ☺** points will be dropped. Modified **HI ☺** questions WILL also show up on the quizzes, exams & final exam)

Total points **600 pts**

The Emmanuel College standard grading scale will be used in this class: [A 93% - 100%, A- 90% -92%, B+ 87% - 89%, B 83% - 86%, B- 80% - 82%, C+ 77%-79%, C 73%-76%, C- 70% - 72%, D 60% - 69%, F 59% or below] The letter grade will never be curved to give a lower letter grade than the standard (i.e. 80% will not be considered to be a C). I do sometimes stretch the lower limits (below C) to your advantage but if I do, I apply the same scale to everyone in class.

Chemistry is not some far away, antiseptic, horrible, technological monstrosity of the 21st century and chemicals are not some maiming, toxic substance from which we all have to keep a distance. Modern society would not be possible without chemistry. Chemistry gives us all pharmaceuticals, all synthetic materials (polyester, nylon, plastics, teflon, styrofoam, perfumes, rubber, nutrasweet), batteries, the ink in your pen, liquid crystals in your LCD watches & in your flat panel TVs. Chemicals also makes up the bodies of all living organisms. Everything that you eat are chemicals. Chemicals are everywhere!

Chemistry is also the required general education classes for high paying jobs such as: medical doctor, engineer, pharmacist, research scientist, nurse. Wouldn't it be great for society as a whole if we could have doctors, engineers, pharmacists, scientists, nurses come from the whole person trained Christian tradition ?

Chemistry 220 is the first semester of a two semester sequence of General Chemistry lecture & lab. We will cover about half the chapters in the text this semester at the rate of about a chapter a week. Do not get too cocky from having done well in your high school science classes to think that you will do well on this course by just being smart. Do not think that just because the class's name says "...Chemistry" that the class automatically will be too boring, too scary, too hard, too much like your high school chemistry class for you to enjoy and do well. Think to yourself: **[I think I'll really work on this course and maybe I'll actually (gasp #1) get an A on the class and/or (gasp #2) enjoy the class.]** Choose whichever gasp you like better ☺

Just keep in mind that **no matter how smart you are**, you will not do well on this course without a **lot of hard work**. In fact just by trying, you can pull yourself up half a letter grade. Conversely if you do not try you will lower your final letter grade by almost half a letter. [never show up to class & miss all **HI** ☺ points (lose 25 points) {25/600 pts}*100 = 4 % pts, ex:76.0 % (C) vs 80 % (B-) final percentage points with **"attempt points"**.] I do not adjust final grades up if you are close to the borderline because I like you. **You** can pull **yourself** up to a higher grade from the borderline by doing all the **"attempt points"** which are all documented by hardcopy evidence.

The grade that you earn in this class will be directly related to how much time you spend preparing for the class. **The biggest secret to doing well in this course is to keep up with the lecture material.** The biggest mistakes that students make which results in a bad grade in the course are: **1)** not attending the lecture **2)** not keeping up with the lecture material and attempting to cram the night before every exam **3)** thinking that just understanding the lecture material means that you will do well on the course – you have to actually work at least the problems on the quiz immediately prior to the exam, the example worked problems from the lecture and the **HI** ☺ problems. When I say you have to work the problem, I mean that you have to do the problems including the final plugging in of the numbers into the calculator to obtain the final correct answer. **Just looking at the worked problem and sort of understanding it does not count as having done the problem.** If you make one of these three common mistakes, you will not learn anything. (You will also get a bad grade on this course.) General Chemistry is going to be a lot of work. **(If General Chemistry is not a lot of work, then you may be doing something wrong and your grades may reflect this.)**

The following is my suggestion for what you should do to study for this class. If you have no time, do the things listed first by no time. If you have more time and want a better grade, do the things listed by lots of time. **[no time:** attend class & really WORK the **HI** ☺ problems, **study the quiz given immediately before the exam**, study lecture notes, rework the example problems in the lecture, do assigned homework problems (not graded & not turned in but assigned so that you know what kind of problems a chemist thinks is important and for your practice), read the book **:lots of time]** **Class attendance is very important to doing well on this course. Not coming to class and not taking the quizzes and exams are the surest way to get an F on the class.** (even without the **HI** ☺ points)

Please come to class the lecture between the quiz and the exams. We will review the quiz and make sure that everyone understands everything on the quiz before the exam. However you should not simply memorize the quiz because I will **not** give the same questions on the exams as appeared on the quiz. The idea is **to understand** the quiz before the exam not to simply memorize everything in sight. It is also **VERY IMPORTANT** to understand the **HI** ☺ questions (which will appear on the exams in a modified form).

For Missed Exams, Quizzes, Final Exam: (VERY IMPORTANT)

There will be no makeup exams, quizzes or final exam without a documented excused absence. **It is of course always in your best interest to ask me if your excuse is an acceptable excused absence.** If I do not accept your excuse, you lose nothing by running the excuse by me.

1. **Exam:**

- a. **no documentation excuse:** For one and only one exam (with no documented excuse), you will be able to drop the exam with no excuse. After the first undocumented excuse, you will earn a zero for any subsequent undocumented missed exam. **If you take all exams, I will drop your lowest one (and only one) exam grade.**
- b. **documentation excuse:** If you have documentation for a missed exam and NOTIFY me BEFORE missing the exam (or NOTIFY ME within 48 hours of missing the exam), I will give you a make up exam. If you notify me with documentation after 48 hours after missing an exam, I will replace the missed exam by your final exam grade.

2. **Quiz:**

- a. **no documentation excuse:** You will earn a zero for a missed quiz but you get to drop one zero for a missed quiz with no documentation. If you miss no quizzes then you will get to drop your one lowest grade quiz instead.
- b. **documentation excuse:** If you have documentation for a missed quiz and NOTIFY ME before missing the quiz (or NOTIFY ME within 48 hours) of missing the quiz, I will give you a make up quiz. 48 hours after missing a quiz, I will replace the missed quiz by the exam grade immediately after the missed quiz.

3. **Missed HI ☺:** If you miss one of the Homework Inclass days (you turn in nothing – no work and no answer), then you will earn a zero on that day's **HI ☺** points. However you get to drop with no documentation and no excuse 30% of your lowest **HI ☺** points. If you miss MORE than 30% of classes AND have a **valid documented excuse** (excuse acceptable to Dr. Hahn) for any of your missed **HI ☺** points, then you can turn in the documentation and your average of your other **HI ☺** points will be plugged in for the documented excused absences.

4 **Final Exam:** If you miss the final exam without documentation, you will **earn a zero for the final exam.** If you miss the final exam with documentation acceptable to me, before the final or within 48 hours after missing the final exam, I will give you a make up Final Exam. If there is not enough time for me to give you the final exam AND complete the final grades for everyone else in class by the grading deadline, I may have to give you an **incomplete** (because of the grading deadline). The incomplete will have to stay in place until I have time to give you a makeup final exam (at a mutually agreed upon time).

Please provide me a hard copy of your documentation for my files ASAP (before missing the work or at the very least within 48 hours of missing the work). **Examples of valid excuses** include: medical grounds, death in the immediate family, documented weather related transportation problems and university business. You must have hardcopy documentation such as a doctor's signed note on letterhead, newspaper article for funeral listing your name, funeral program obtained at the service or a letter from a professor or

coach stating that you worked on behalf of the university on the given date. Examples of working on behalf of the university could be that you were a part of an official university sports team or that you represented the University at a conference. **Examples that are not valid excuses** include: personal problems, going away for the weekend, etc. [In general acceptable excuses for absences for missed exams will be much more rigorous than acceptable excuses for missing the **HI** ☺ (homework in class)] In any case, it is always in your best interest to tell me your excuse because it is possible that I may accept your excuse.

In Summary: You will be allowed to drop one lowest quiz grade (1/4 of quiz grades) and one (1/4 of exam grades) lowest exam grade. You will not be allowed to drop the cumulative final exam. You can also provide documentation if you miss more than 30% of your **HI** ☺ points.

The exams will cover the materials discussed in class. Unless specifically mentioned, exams will not cover materials in the textbook that were not discussed in the class. However it is strongly recommended that you read the text. Exams and the Final Exam (1/3MC, 1/3SA, 1/3LA) will have almost identical format. Quizzes will be mostly short answer and long answer. The **HI** ☺ questions may be any format question with ½ credit for showing work.

When you get back your graded quizzes and exam you will also get an answer key with a list of points for common mistakes. Check your graded exam/quiz against the answer sheet. **Keep in mind that I am grading not just your one exam but also exams for all the other students in General Chemistry, and Organic Chemistry. I am a human being so you are supposed to check for human error. (Help me by checking for human error.)** You will get to keep your exams, quizzes & **HI** ☺ to study so that you learn from your mistakes. You will get partial credit for the long answer (LA) & some short answer (SA) questions.

If there are any mistakes on the graded exams any requests for regrades **must** be made during the class in which the exam, quiz or **HI** ☺ is returned in writing. Once you leave the class, any requests for regrades will **not** be honored.

Absences: If you miss a class, it is your responsibility to obtain the lecture notes and any class assignment given out during the classes you missed. I will not redo the lecture individually for any person who missed a class. **Missing a class during which I give an assignment (such as a change in exam date) does not excuse you from the assignment. It is your responsibility to contact classmates or me either before your missed class period or as soon after missing the class as possible.**

Students with Disabilities: Students who have special conditions as addressed by the Americans with Disabilities Act should notify the professor of the course immediately. **Academic Dishonesty:** Academic dishonesty in any form will not be tolerated. University regulations on academic honesty will be strictly enforced throughout this course **Cell Phones and Electronic Devices:** Please turn off cell phones and electronic devices before entering the classroom. Use of cell phones is strongly discouraged in the classroom. You may **not** use your cell phone as a calculator during an exam or quiz.

At the exam, I will ask you to leave your book bags, large purses, laptops and cell phones in front of the room (away from your working area)

Schedule of Exams and Quizzes: Exams (E) will take up an entire class period. Quizzes (Q) will be given in the last 15 minutes of class. (Monday = M, Wednesday = W, Friday = F)

Exam and Quiz dates

8/23 W..... Quiz I
8/28 M..... Exam I
9/15 F..... Quiz II
9/20 W..... Exam II
10/13 F..... Quiz III
10/18 W..... Exam III
11/1 W..... Quiz IV
11/6 M Exam IV

Period 2 (MWF 9 am)	Final Exam Monday 11/20 at 8 am.....	Final Exam
Period 3 (MWF 10 am)	Final Exam Thursday 11/16 at 10:30 am.....	Final Exam

Important Dates & Holidays

9/4 Monday Labor Day Holiday, no classes
9/28 Thursday to 10/1 Sunday – Fall Break (no classes)
10/3 Tuesday - last day to withdraw
10/6 Friday Feast of Ingathering [Feast Week Schedule 4th period class (11-11:50 MWF) meets MTW, Friday 3rd period class (10-10:50 MWF class) canceled for Feast Week Schedule] – no effect our classes
10/27 F – 10/29 Sun - Homecoming
11/15 Wednesday - last class meeting of the semester
11/16 Thursday – 11/21 Tuesday - Final Exam Period
11/22 Wednesday – 1/3/18 – Christmas Holiday

I personally make up all of the exams & I personally grade all of the exams. I never let undergraduates, staff or other faculty help me grade the exam – not even to add up the final points. Because there is partial credit, this policy ensures consistency in grading.

One final point, my objective is to teach General Chemistry to everyone in this class. I want you ALL to do well because you are my students. If you have any difficulties, please come to see me before your difficulties cause irreparable damage. I may be able to advise you on how to best study for this class so that you spend your time for the best effect. Do not just stop trying without coming to see me first.

Syllabus Agreement Form, Information Sheet & Permission to Return Exams Form

I have read and understand the policies stated in the syllabus for Dr. Hahn's **CHM 220 Lecture** class for the Fall semester of 2017. All questions have been answered to my satisfaction. By signing this sheet I agree to abide by the policies stated therein.

Your signature _____ Dr. Hahn **CHM 220 Lecture Fall 2017**

Print your name: _____ Date submitted: _____

I am in the [(MWF 9 am) (MWF 10 am)] (circle one) section

***** Information Sheet

contact phone # _____ contact email address _____

major _____ year (please circle one) fresh, sophomore, junior, senior, other

if other please explain _____ last chemistry course taken (course name) _____

when (year, semester) _____ where (here, other) _____ cumulative GPA _____

grade received on last chemistry course _____

other science courses taking currently (give course name) _____

Are you doing research? (yes, no) If so with whom? _____

Why are you taking this class? _____

hobbies: _____

Feel free to tell me anything else you would like me to know about you: _____

***** Permission to Return Exams

I _____ (sign name) [(do) or (do not)] (circle one) give Dr. Hahn permission to return my actual exam/quizzes/HI in a self serve fashion in folders.