

College Chemistry I

CH 121 – Winter 2019

CRN: 33545 Section 01: M – F 4:00 – 4:50 PM (MH 208)

Instructor: Dr. Ommidala Pattawong

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Office: Madrone Hall 209

Office Hours: M 11am – 12 pm & 2 – 3 PM

CRN: 33727 Section 02: M – F 2:00 – 2:50 PM (WOH 203)

Instructor: Dr. Michael Hruschka

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Office: Madrone Hall 211

Office Hours: M & Tu 10 – 11 AM

Course Information:

The first of a three term college chemistry sequence for students in human performance, certain health occupations programs, agriculture, animal science, and fisheries and wildlife. This sequence is for students who have had no previous training in chemistry and whose program of study requires only a one-year sequence of college chemistry. Topics include measurement, chemical calculations, chemical formulas and equations, gas laws, thermochemistry, atomic structure and periodicity. Entering students are expected to have a working knowledge of high school algebra and scientific notation. Students are advised to investigate and understand the degree requirements at the university where they intend to transfer. (Note - this sequence is not equivalent to General Chemistry. CH 121 does not fulfill the Baccalaureate Core requirements at OSU, however the next two courses in the series, CH 122 and CH 123, fulfill Baccalaureate Core requirements at OSU.) CH 121, CH 122, CH 123 must be taken in order.

Student Learning Outcomes:

1. Differentiate the historical developments leading to the development of atomic theory and the Periodic Table.
2. Solve scientific problems with quantitative methods using dimensional analysis and/or algebra regarding unit conversions, stoichiometry, gas laws, and thermochemistry.
3. Apply chemical principles associated with chemical and physical changes and properties of matter, nomenclature, chemical reactions, thermochemistry, the kinetic theory of a gas, and quantum theory.

Minimum Requirements:

MTH 095 Intermediate Algebra with a grade of 'C' or better

Workload Expectation:

Students taking chemistry courses are expected to work a minimum of 3 – 4 hours of work per week outside of class for every credit hour. Examples of outside work include reading, reviewing lecture materials, study time, working practice problems, and doing homework assignments.

Required Course Materials (Available for you to purchase at the bookstore):

1. Principles of Chemistry: A Molecular Approach, 3rd Ed., Tro. (*The 1st and 2nd editions are okay. Note that the pages will be different from what the lecture manual refers to.*)
2. Access Code for Knewton Alta Online Homework
3. Chemistry 121 Lecture Manual, Marci Moling
4. Non-graphing/non-programmable Scientific Calculator (TI 30xa). Students will be required to use a non-graphing/non-programmable scientific calculator for quizzes and/or exams.
5. A notebook for the Homework Log

Attendance and Classroom Decorum:

Class attendance and participation are very important to be successful in the learning of chemistry. Students are expected to attend class regularly, on time, and engage in activities and/or discussions. Cell phone use is distracting to others and is not allowed in the classroom. The use of a laptop computer during lecture class is approved for CH 121 lecture material only, i.e. lecture is not a time to do homework.

Grade Assessments: Your grade will be assigned based on your performance in the following areas:

6 Mini Exams	6 x 50 pts = 300 pts
Final Exam	150 pts
In-Class Activities	8 x 10 pts = 80 pts
Best 6 out of 7 Online HWs	6 x 10 pts = 60 pts
HW Log	2 x 5 pts = 10 pts
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Total	600 pts

Course Grade:

Assignment of course grades will follow an approximate breakdown of

- A = 90-100% Excellent Work
- B = 80-89% Good Work
- C = 70-79% Average Work
- D = 60-69% Poor Work
- F = 0-59% Failing Work

An incomplete grade (I) may be given at the discretion of the instructor. However, a student must have a passing grade at the time an incomplete is assigned.

Exam Policies:

All exams are given in class. Examinations must be taken at the scheduled time unless prior arrangement is made. Students who have conflicts with exam days due to other College functions, illness, or family emergencies must contact the instructor prior to the exam. Documentation of the College function, illness and/or family emergency must be provided to schedule a make-up exam. Any academic dishonesty during any exams including cheating, using electronic devices, cell phones, lecture materials, or books that are not permitted, will result in a score of ZERO for the exam!

The final exam is comprehensive. You may bring one 3" x 5" notecard with notes on both sides to the final exam. A missed final exam will receive a score of zero.

Exam Re-Grade Request:

All exam re-grade requests must be submitted in writing to a course Instructor within one week of the exam being returned to students. The entire exam will be re-graded for accuracy. The re-grade request will be compared against a photocopy of the originally graded exam. Note: Arithmetic errors will be corrected immediately and are not considered re-grade requests.

In-Class Activities:

A student's participation and engagement are essential parts of learning. In this course, students are expected to attend every lecture and participate in the in-class activities that sometimes involve demonstrations, worksheets, and/or fun activities. A total of 80 points can be earned through in-class activities. Each in-class activity is worth 10 points. The in-class activities are designed as an active learning approach.

Online Homework:

To succeed in chemistry, like learning a foreign language, you should study and practice every day. As material is covered you will find the problems are easier to work and not as time consuming as if they are attempted just before the due date. Refer to the schedule for homework due dates. You can access **Knewton Alta Online Homework** via Moodle. Each homework assignment is worth 10 points. *Your six highest scores will be used to determine your total homework score.* Homework is due by 11:59 pm on the dates listed in the lecture schedule.

NOTE: This homework is adaptive to each learner. If you don't get consecutive correct answers, the system will think that you have not mastered a particular topic; therefore, it will throw more problems at you. If this happens, please get help from your instructor to avoid frustration.

For late homework, students can turn in completed assignments after the due date up to 2 days late. However, there will be 5% penalty per day late.

For your first time doing homework, the Knewton Alta Online Homework will prompt you to enter an access code. You can purchase this access code online or at the LBCC bookstore. Knewton Alta offers a grace period on payment; for most courses, this is 14 days from the first day of the term.

Homework Log:

For any homework problems that require calculations, you will need to show your work in a notebook. This is your Homework Log to keep throughout the term. The work should be presented in a clear and organized manner so that you can review your work, prepare for exams, and allow me to follow your thought process easily when you need help with your homework. The Homework Log is due in class on week 2 and 9. Each homework log is worth 5 points.

Extra Credit:

1. *Homework Completion:* If you complete all of the online homework assignments, the points from your lowest homework will be used as extra credit.
2. *Mini Exam Reflection:* Students who submit the exam reflection for their mini exam 1 and 2 are eligible for 6 extra credit points (3 points for each exam correction). The exam reflection will give you a chance to reflect on your exam performance and, more importantly, on the effectiveness of your exam preparation. The exam reflection will be given in class as well as posted on Moodle. You will answer the questions sincerely for these extra credits. Please see course schedule for the exam reflection deadline.
3. *Strategies for Success Workshop:* This workshop is organized by the College Skills Zone. You will learn and practice the organizational strategies, study strategies, effective textbook reading, and efficient test preparation. These skills are important in order to be successful in college, especially in chemistry class. Students, who sign up and attend this 50-minute workshop any time before the first mini exam (Jan. 18th, 2019) are eligible for 5 points extra credit.

Resources:

Your success is very important to me! I encourage you to seek help from one or more of the following resources:

1. Instructor office hours (see the front page for days, times and locations)^[SEP]
2. Ask questions during lecture (or immediately before/after lecture)^[SEP]
3. Science Help Desk
4. Academic Support (<http://linnbenton.edu/future-students/academic-support/>)

Science Help Desk:

The Science Help Desk is located on the first floor of Madrone Hall in the atrium area. The Help Desk is staffed approximately 20 hours per week. Hours of the Help Desk are posted in the Help Desk area and throughout Madrone Hall.

Tips for Success:

- Attend every lecture, and come prepared!
- Review lecture notes after lecture; clarify confusing points immediately
- Do homework problems regularly
- Form a study group; take turns “teaching” each other concepts/problems
- Use your lecture notes to guide your studying
- The homework problems should be considered the minimum number of problems to do to ensure success
- Repeat homework problems and/or worksheet problems until you can do them quickly, without looking at any notes or answer keys
- Address problems as they arise. The sooner you attempt to resolve an issue, the better!

Drop/Withdraw Policy:

If you are withdrawing from the class you must file a Schedule Change Form with Registration or use WebRunner. If you formally drop the class by Monday of the second week of the term, you will receive a tuition refund. If you withdraw after the Monday of the second week of instruction through the seventh week a ‘W’ will show up on your transcript. No withdrawals are allowed after the end of the seventh week. An instructor may not assign a “W” grade.

If you received financial aid or veteran’s benefits PLEASE talk with associates at the appropriate office to determine what effects on eligibility dropping a course will have. Don’t jeopardize your eligibility!! You can contact the Financial Aid Office by calling (541) 917-4850 or by visiting the Financial Aid Office in Takena Hall.

If you stop attending the course without formally withdrawing you will continue to accumulate grades (zeroes for all assignments not turned in) and will receive the grade assigned by the instructor. You will also be held accountable for all charges on your account.

Academic Integrity:

“An instructor has the right to issue a grade of F for the course in which the instructor has reason to believe the student has cheated. A student has the right to appeal such action in accordance with the Students’ Rights, Responsibilities and Conduct Policy.” The preceding statement is Administrative Rule No. 7030-02.

LBCC Comprehensive Statement of Nondiscrimination:

LBCC prohibits unlawful discrimination based on race, color, religion, ethnicity, use of native language, national origin, sex, sexual orientation, gender, gender identity, marital status, disability, veteran status, age, or any other status protected under applicable federal, state, or local laws. For further information see Board Policy P1015 in our Board Policies and Administrative Rules.

Center for Accessibility Resources:

You should meet with your instructor during the first week of class if:

1. You have a documented disability and need accommodations.
2. Your instructor needs to know medical information about you.
3. You need special arrangements in the event of an emergency.

If you have documented your disability, remember that you must make your request for accommodations through the Center for Accessibility Resources Online Services web page every term in order to receive accommodations. If you believe you may need accommodations but are not yet registered with CFAR, please visit the CFAR website at www.linnbenton.edu/cfar for steps on how to apply for services or call 541-917-4789.

Changes to the Syllabus: I reserve the right to change the contents of this syllabus due to unforeseen circumstances. You will be given notice of relevant changes in class, through a Moodle Announcement, or through LBCC e-mail.

Lecture Schedule

****Note:** This schedule of topics, homework due dates, and exam dates is subject to change.
All homework assignments are due by 11:59 pm on the date indicated in the lecture schedule.

Course Content

Chapter 1	Matter, Measurement, and Problem Solving
Chapter 2	Atoms and Elements
Chapter 3	Molecules, Compounds, and Chemical Equations
Chapter 4	Chemical Quantities and Aqueous Reactions
Chapter 5	Gases
Chapter 6	Thermochemistry
Chapter 7	The Quantum-Mechanical Model of the Atom

Week No.	Mon.	Tues.	Wed.	Thurs	Fri.
1 (1/7-1/11)	Introduction Syllabus 1.2	1.3-1.4	1.6	1.7	1.8
2 (1/14-1/18)	2.2-2.4 HW Log Due Ch 1 HW Due	2.5-2.6	2.7	2.8	Mini Exam 1
3 (1/21-1/25)	No Class Ch 2 HW Due	3.2-3.4	3.5 (Optional) Exam 1 Reflection Due	3.6	Mini Exam 2
4 (1/28-2/1)	3.7 Ch 3 Part 1 HW Due	3.8	3.9 (Optional) Exam 2 Reflection Due	3.10	Mini Exam 3
5 (2/4-2/8)	4.2 Ch 3 Part 2 HW Due	4.3	4.4	4.5	Mini Exam 4
6 (2/11-2/15)	4.6 Ch 4 Online HW Due	4.7	4.8	4.9	Mini Exam 5
7 (2/18-2/22)	No Class Ch 4 Paper HW Due	5.2	5.3	5.4	5.4
8 (2/25-3/1)	5.8, 5.6 Ch 5 Online HW Due	5.7	1.5, 6.2	6.3	Mini Exam 6
9 (3/4-3/8)	1.5 & 6.2-6.3 Ch 5 Paper HW & Log Due	6.4, 6.6	6.7	6.8	6.9
10 (3/11-3/15)	7.1 – 7.2 Ch 6 Online & Paper HW Due	7.3	7.5	7.6	7.6 Ch 7 Paper HW Due

Final Exams:

For Pattawong's Section – Monday, March 18th 3:00 – 4:50 PM in MH 208

For Hruschka's Section – Monday, March 18th 3:00 – 4:50 PM in WOH 203