

CH221 General Chemistry 1 (5 credits) Winter 2021

Chemistry 221 Zoom Lecture

CRN	Live Zoom Lecture	Instructor
31723	Tuesday 8:30-9:50 am	Beth Manhat
31946	Tuesday 12:00-1:20 am	manhatb@linnbenton.edu

- Each CRN will meet Tuesdays, as listed above. You are required to attend the Zoom lecture for the CRN in which you enrolled. I will provide weekly information, work targeted problems, and provide practice for students.
- Videos of chapter lecture materials are posted on Moodle. I expect that you will watch these videos and take notes as you would in a face-to-face class.

Chemistry 221 On Campus Lab *You will attend lab on-campus every other week*

CRN	Lab Day/Time	Instructor
33862	Wednesday 8:00 - 10:20 am, MH 214	Beth Manhat
33860	Wednesday 11:00 - 1:20 pm, MH 214	manhatb@linnbenton.edu
33864	Wednesday 2:00 – 4:20 pm, MH 214	

- To meet social distance requirements, a maximum of 12 students enrolled can attend each lab meeting at a time. In your non-on campus meeting, there will be a self-guided/online lab.
- On campus: partitions are constructed in the lab. Masks are required. You need to purchase a lab notebook + goggles.

Drop-in Study Hours

Monday	Tuesday	Wednesday	Thursday	Friday
11:00am-12:00pm	5:00pm-6:00pm	none	2:00-3:00pm	10:00am-11:00am

- I will help you with any concepts, problems, or provide additional examples to solve together.
- 1:1 meetings are also available (3/term required) – see link on Moodle

 **Check Linn-Benton email daily.** One weekly summary email will be emailed Sunday. I check email often but allow reasonable time for replies. Use appropriate subjects for convenience since we will email often.

 **All lecture and lab items will be posted & submitted via Moodle (LBCC online platform).** Lecture notes, lecture videos, homework, labs, exams, and quizzes will be available on Moodle. You can access it through MyLB [here](#).

Prerequisites: MTH 095 + one of the following: passing score on the chemistry entrance exam; CH 150 with a grade of “C” or better; CH 121 with a grade of “C” or better; CH 112 with a grade of “C” or better. **Corequisite:** CH221L, MTH111.

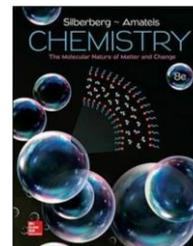
 **Course Description:** CH221 is the 1st in a 3-course sequence. It is recommended for natural science and pre-professional degree seekers. We will cover:

Matter Classification and Properties				
Measurements and Conversions (Moles & Stoichiometry)		Periodic Table	Atomic Structure	
Nomenclature	Solution Chemistry	Gas Laws	Enthalpy and Heat	Quantum Chemistry

Workload Expectation: Most students earning an “A” put **12-15 hrs/week** into this class. This includes lecture and lab time, reviewing concepts with textbook/other resource, practicing problems, and completing homework and lab assignments.

Instructional Materials:

1. Chemistry: The Molecular Nature of Matter and Change, 9th or 8th Ed., Silberberg
The text is Digital Direct Access (**DDA**) and is included in your tuition unless you opt-out. The textbook can be found on the course Moodle site.
2. Knewton Alta online HW (44.95\$/yr if you did NOT take CH150 at LBCC).
Access on the course Moodle site.
3. Carbonless copy lab notebook
4. Lab goggles
5. Scientific Calculator
6. Download & familiarize yourself with the Adobe Scan and Zoom apps



Assessment Criteria and Methods of Evaluation:

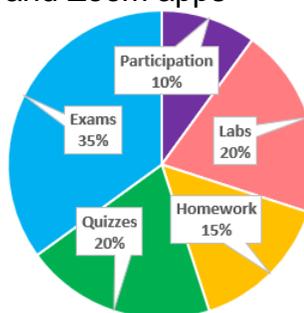
Tentative Grade Distribution:

Grades within 0.50 % of the next letter are rounded.

Final grades are not curved. Grades are defined as:

A = 90% – 100% B = 80% – 89% C = 70% – 79%

D = 60% – 69% F = below 59%



An incomplete (IN) may be assigned with instructor discretion AND only at a time in which the student is passing.



LBCC Grading Guidelines

<https://linnbenton.smartcatalogiq.com/en/current/Catalog/Academic-Information-and-Regulations>

Exams (3, 35% total):



- Exams cover specified topics using multiple choice & short answers questions
- 3 exams via Moodle (Midterms 10 % each; Final 15%)
- Dedicate **120 mins** to complete exam within the time they are open
- Midterms: 5pm Thurs–11:59pm Fri; Final: finals schedule, 5pm Tues–11:59pm Wed

Quizzes (6, 20% total):



- Quizzes are designed to help students keep up with material prior to exams
- 6 chemistry quizzes + syllabus quiz via Moodle (lowest quiz dropped)
- Dedicate **45 mins** to complete quizzes within the time they are open
- Quizzes: 5pm Thurs – 11:59pm Fri
- Quizzes and exams are open notes/open book, but are written like face-to-face tests. You will run out of time if you are not prepared as such.
- Each assessment includes acknowledging the LBCC academic integrity policy; **If cheating is suspected, you will receive a 0 and the class loses 15 mins on the next assessment.**
- Open ended questions require you to show your work for credit. You can typed work into the space provided in Moodle or complete it on scratch paper. If you use scratch paper, use Adobe scan to collect work and submit it.

Make-Up Quizzes and Exams: Missed assessments are scored 0. You can contact me to coordinate a missed scheduled quiz or exam within 5 days of the original date.

Homework (15% total):

- To succeed in chemistry, you will need to study or practice on most days.
- Graded homework is via Knewton, an online homework platform. Individual assignments are listed by chapter on Moodle, and are due Wednesdays at 11:59pm.
- All Knewton assignments count towards your grade, 100 points each.
- Late work is accepted with a 15% deduction and can be submitted up to 21 days late.
- Non-Knewton HW may be assigned with specified due dates.

Class Participation (10% total):

- It is imperative to maintain a safe learning environment with unconditional respect. Engage with the videos, HW, textbook, lab materials, & each other.
- Every student is required to schedule **three 1-on-1 Zoom meetings** with me this term.
- Each student is assigned to a Work Group. This aims to create community and to provide you with a support network. Your Work Group will practice problems in and out of lecture, and needs to touch base 1x/week outside of lecture. You can work together through text, Zoom, email, Google Meetings, LBCC [Discord](#) in #general-chemistry or Study Rooms, etc.

Labs (Safety + 10, 20% total)

- There are 2 types of labs:
 - In-person labs: To accommodate social distancing, 12 students max. may attend a given face-to-face lab meeting. Each student will complete 4 in-person labs.
 - Virtual labs: No meeting. Online simulations, videos, or data will be used.
- All Lab information will be posted on Moodle.
 - All labs include 2 submissions: Pre-lab assignment and Post-lab assignment.
 - Pre-lab assignments, due: Tuesday 11:59 pm. Watch lecture videos prior to attending in-person labs or accessing virtual data.
 - Post-lab assignments, due: next Wednesday 11:59pm
- Passing CH221 requires passing the lab section with a > 70%.
 - Late labs will be accepted 1 week after the due date with a 2-point deduction.
 - Later labs may be accepted with instructor discretion for up to half credit.
 - Not turning in a lab receives a zero.

Student Learning Outcomes:

1. Differentiate the historical developments leading to the the development of the atomic theory and the Periodic Table.

1.2. Solve scientific problems with quantitative methods using dimensional analysis and/or algebra regarding unit conversions, stoichiometry, gas laws, and thermochemistry.

1.3. 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.

4. Work safely in a laboratory environment while observing and accurately recording measurements related to chemical phenomena

**Course Content and Outcome Guide:**

<http://linnbenton.smartcatalogiq.com/current/Catalog/Courses/CH-Chemistry/200/CH-221>

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 BP-1015](#). Title II, IX, & Section 504: Scott Rolen, CC-108, 541-917-4425; Lynne Cox, T-107B, 541-917-4806, LBCC, Albany, Oregon. To report: linnbenton-advocate.symplicity.com/public_report

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. 7030-01.

 **[Student Code of Conduct/ Rights and Responsibilities:](#)**
<https://www.linnbenton.edu/current-students/administration-information/policies/students-rights-responsibilities-and-conduct.php>

Drop/Withdraw Policy:

- If you are withdrawing from class, you must file a Schedule Change Form with Registration or use WebRunner. To receive a tuition refund, drop the class by the 2nd Monday of the term. To withdraw from the class, drop the class by the end of the 7th week of the term. The course will record as a “W” on your transcript.
- If you stop attending the course and DO NOT formally withdraw, you will accumulate zeroes for assignments not turned in and receive the grade in accordance with work completed.
- If you received financial aid or veteran’s benefits, talk with associates at the appropriate office to determine what effects on eligibility dropping a course will have. You can contact the Financial Aid Office by calling (541) 917-4850 in Takena Hall.

Center for Accessibility Resources:

You should contact 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 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.

You are required to contact me prior to any accommodations are applied.

CH221 Winter 2021 Tentative Schedule

Drop Date: 1/11/21

Withdraw Date: 02/21/21

Week	Lecture – Tuesday (Zoom) Quiz/Exam: Thurs-Fri Final: Finals Schedule	Lab – Wednesday Pre-lab due: Tues 11:59pm Post-lab due: next week 11:59pm	Homework due 11:59 pm
1 01/04 – 01/10	Chapter 1 – 1.1, 1.5, 1.4 Chapter 2(A) – 2.1, 2.9 Syllabus Quiz 01/07 5pm – 01/08 11:59pm	Group A and B: Lab 1 Graphing Tutorial Lab Safety Assignments (2) *due next Tues 11:59pm	Video Intro Due Fri 01/08
2 01/11 – 01/17	Chapter 2 (A) – 2.2, 2.3, 2.4, 2.5 Chapter 24 – 24.1, 24.7 Quiz 1 01/14 5pm – 01/15 11:59pm	Group A: Lab 2 Separations + SF Group B: Lab 3 Density Graphing	Knewton CH1 Knewton CH 2A (2.1, .9) Due Wed 01/13
3 01/18 – 01/24	Chapter 2 (B) – 2.6, 2.7, 2.8 Chapter 3 – 3.1 Quiz 2 01/21 5pm – 01/22 11:59pm	Group A: Lab 3 Density Graphing Group B: Lab 2 Separate Mixture + SF	Knewton CH 2A (2.2-.5) Knewton CH 24 Due Wed 01/20 Diversity Assignment Due Fri 01/22
4 01/25 – 01/31	Chapter 3 – 3.1, 3.2, 3.3, 3.4 Exam 1 01/28 5pm – 01/29 11:59pm	Group A: Lab 4 Moles + EF Group B: Lab 5 Hydrates	Knewton CH 2B (2.6-8) Due Wed 01/27
5 02/01 – 02/07	Chapter 3 – 3.4 Chapter 4 – 4.1, 4.3, 4.4 Quiz 3 02/04 5pm – 02/05 11:59pm	Group A: Lab 5 Hydrates Group B: Lab 4 Moles + EF	Knewton CH 3 (3.1-.4) Due Wed 02/03
6 02/08 – 02/14	Chapter 4 – 4.2, 4.6, 4.5 Chapter 5 – 5.2, 5.5, 5.4 Quiz 4 02/11 5pm – 02/12 11:59pm	Group A: Lab 6 Vinegar Titrations Group B: Lab 7 Chemical Reactions	Knewton CH 3 (3.4) CH 4 (4.1, .3, .4) Due Wed 02/10
7 02/15 – 02/21	Chapter 5 – 5.3, 5.4, 5.6 Exam 2 02/18 5pm – 02/19 11:59pm	Group A: Lab 7 Chemical Reactions Group B: Lab 6 Vinegar Titrations	Knewton CH 4 (4.2,.4-.6) CH 5 (5.2, .5, .4) Due Wed 02/17
8 02/22 – 02/28	Chapter 6 – 6.1, 6.2 Quiz 5 02/25 5pm – 02/19 11:59pm	Group A: Lab 8 Thermodynamic Titration Group B: Lab 9 Simulated Gas Law	Knewton CH 5 (5.3-.4) Due Wed 02/24
9 03/01 – 03/07	Chapter 6 – 6.4, 6.5, 6.6 Quiz 6 03/04 5pm – 02/19 11:59pm	Group A: Lab 9 Simulated Gas Law Group B: Lab 8 Thermodynamic Titration	Knewton CH 6 (6.1-.3) Due Wed 03/03
10 03/08 – 03/14	Chapter 7 – 7.1, 7.2, 7.3, 7.4 No Quiz	Group A & B: Lab 10 Atomic Spectra Extra Credit CH221 lab Review	Knewton CH 6 (6.4-.6) Due Wed 03/10
11 03/15 – 03/21	 Exam 3 (Final) Tues, 03/16 5pm – 03/17 11:59pm	No new lab assignment Last day: Thurs 11:59pm	Knewton CH 7 Due Wed 03/17 Last day: Thurs 03/18

face-to-face virtual

Flexibility Statement: The instructor reserves the right to modify course content and/or substitute assignments and learning activities in response to institutional, weather or class situations.