Linn-Benton Community College

Albany Campus
6500 Pacific Blvd SW, Albany, OR 97321

CH221 General Chemistry 1 (5 credits) Fall 2021

CRN	Live Zoom Lecture	Instructor
24183	Monday 9:30 am - 10:50 am	Beth Manhat
24182	Monday 12:30 pm - 1:50 pm	manhatb@linnbenton.edu

- Each CRN will meet Monday, as listed above. You are required to attend the Zoom lecture for the CRN in which you enrolled. Weekly information and group work will be provided.
- Videos of chapter lecture materials are posted on Moodle. It is expected that you will watch these videos and take notes as you would in a face-to-face class prior to attending class.

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

CRN	Lab Day/Time	Instructor
26680	Tuesday 8:00 am - 10:50 am, MH 214	Beth Manhat manhatb@linnbenton.edu
26681	Tuesday 11:30 am - 2:20 pm, MH 214	
26682	Tuesday 3:00 pm – 5:50 pm, MH 214	

CRN	Lab Day/Time	Instructor
26684	Thursday 11:30 am - 2:20 pm, MH 214	Omid Sadeghihosseinabadi sadegho@linnbenton.edu
26685	Thursday 3:00 pm – 5:50 pm, MH 214	

Masks are required on campus. You need to purchase a lab notebook + goggles.

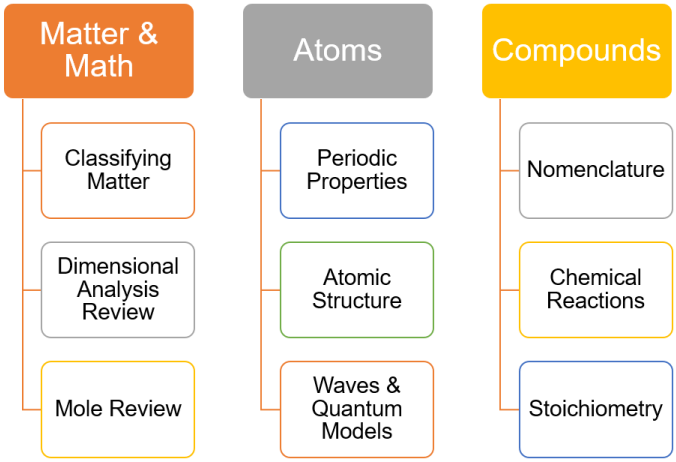
Manhat Drop-in Study Hours				
Monday	**Tuesday**	**Wednesday**	**Thursday**	**Friday**
5:00-6:00pm	none	by appointment	2:00-3:00pm	10:00am-11:00am

- I can help with any concepts, problems, labs, or provide additional examples to solve.
- 1:1 meetings are also available (2 required this term) – see link on Moodle

Check Linn-Benton email daily. One weekly summary email will be sent to your LBCC account Mondays after Zoom class. I check email often (less so after 9pm and on weekends), so please allow reasonable time for responses. Use appropriate subjects for convenience since we will email often and for me to know if I can answer from my mobile device or not.

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 MyLBCC here.

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:

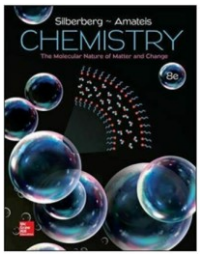


Workload Expectation: Most students earning an "A" put **12-15 hrs/week** into this class. This includes lecture and lab time, reviewing concepts with the textbook/other resource, practicing problems, and completing homework and lab assignments.

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.

Instructional Materials:

1. Chemistry: The Molecular Nature of Matter and Change, 9th or 8th Ed., Silberberg Digital Direct Access (**DDA**) and is included in your tuition ($44.50) unless you opt-out. Directions for textbook access is found on Moodle.
2. Knewton Alta online HW (44.95$/yr if you did NOT take CH150 at LBCC). Knewton Access is found on Moodle.
3. Bound Duplicate lab notebook
4. Lab goggles
5. Scientific Calculator
6. Download & familiarize yourself with Zoom, Adobe Scan

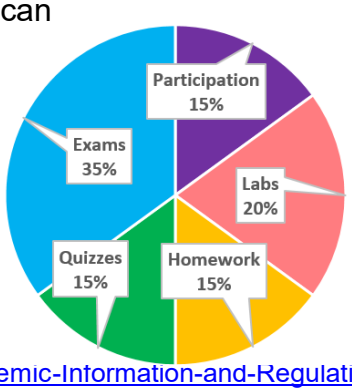


Assessment Criteria and Methods of Evaluation:

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 **130 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, 15% total):

- Quizzes are designed to help students keep up with material prior to exams
  5 content quizzes + syllabus quiz via Moodle (lowest quiz dropped)
- Dedicate **60 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.
- Each assessment includes acknowledging the LBCC academic integrity policy; **If cheating is suspected, you will receive a 0 AND the class will lose time 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 a picture/pdf program on your phone or scanner and submit the work.

Make-Up Quizzes and Exams: Missed assessments are scored 0. You can contact me to coordinate a missed scheduled assessment +/- 3 days of the original assessment date (one time).

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 Friday 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 (15% 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 **two 1-on-1 Zoom meetings** with me this term.
- Each student is assigned to a Work Group. The purpose of the group is to create community and to provide you with a support in Gen Chem. Your Work Group will practice problems in lecture and are encouraged to work together outside of class via text, Zoom, email, Google Meetings, LBCC Discord in #general-chemistry or Study Rooms, etc.
- Most weeks, will also have Discussion posts.

Labs (Safety + 10, 20% total)

- All Lab information will be posted on Moodle (no manual to purchase).
- Students arriving to lab after the lab's introduction (~ 15 mins) may not be allowed in lab that day.
  - You could miss important changes to the lab or safety information
- All labs include 2 submissions: Pre-lab write-up and Post-lab write-up.
  - Pre-lab assignments: due at lab.
  - Post-lab assignments: due one week later, as per instructor direction
- Passing CH221 requires passing the lab section with a > 70%.
  - Late pre-labs will be accepted with 1pt deduction up to a week.
  - Late post-labs will be accepted with 2pt deduction up to a week.
  - Lab materials accepted beyond a week may be accepted with instructor discretion for up to half credit.
  - Not turning in lab materials receives a zero.
- You can miss up to two in-person labs and have sample data supplied in order to complete the post-lab assignment for 50% credit. Additional missed labs will count as a 0. Communicate with your instructor to discuss this option.

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.

Course Content and Outcome Guide:
http://linnbenton.smartcatalogiq.com/current/Catalog/Courses/CH-Chemistry/200/CH-221

Student Code of Conduct/ Rights and Responsibilities:
https://www.linnbenton.edu/current-students/administration-information/policies/students-rights-responsibilities-and-conduct.php

Student Learning Outcomes:

1. Differentiate the developments of the atomic structure and the Periodic Table
2. Solve scientific problems and apply chemical principles associated with atomic structure, development of electronic structure of atoms, electron configurations and periodic properties.
3. Apply chemical principles associated with chemical bonding models and theories.
4. Solve scientific problems with dimensional analysis and apply chemical principles associated with chemical equations and stoichiometry.
5. Solve scientific problems with quantitative methods and apply chemical principles associated with matter, unit conversions, and uncertainty.
6. Observe chemical phenomena, analyze recorded data, and support and defend the analysis while working safely in a laboratory environment.

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.

Drop/Withdraw Policy:

- If you are withdrawing from class, 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 Fall 2021 Tentative Schedule

Drop Date: 10/4/21 Withdraw Date: 11/14/21

We are introducing new curriculum for CH221, resulting in some "jumping around" the textbook.

Week	Lecture – Monday (Zoom) Quiz/Exam: Thurs-Fri Final: Finals Schedule	Lab – Tuesday/Thursday Pre-lab due: at lab Post-lab due: next lab day	Homework due 11:59 pm
1 09/27 – 010/03	Chapter 1 – 1.1, 1.5, 1.4 Chapter 2, 3, 4 – 2.1, 2.9, 3.1, 4.1 **Syllabus Quiz** **09/30 5pm – 10/01 11:59pm**	Lab 1: Check-in, Excel & Google Sheets Skills	Video Intro **Due Fri 10/01** 3 video comments **Due Sun 10/03**
2 10/04 – 10/10	Chapter 2 – 2.2, 2.3, 2.4, 2.5, 2.6 Chapter 7 – 7.1 **Quiz 1** **10/07 5pm – 10/08 11:59pm**	Lab 2:Separating a Mixture	Knewton: CH 1, 2.1, 2.9, 3.1, 4.1 **Due Fri 10/08**
3 10/11 – 10/17	Chapter 7 – 7,2, 7.3, 7.4 Chapter 8 – 8.1 **Quiz 2** **10/14 5pm – 10/15 11:59pm**	Lab 3: Determine Density by Graphing	Knewton: CH 2.2-2.6, CH 7.1 **Due Fri 10/15**
4 10/18 – 10/24	Chapter 8 – 8.2, 8.3, 8.4 Chapter 2 (covalent) – 2.7, 2.8 Chapter 9 – 9.3, 9.5 **Exam 1** **10/21 5pm – 10/22 11:59pm**	Lab 4: Flame Lab and Quantum Numbers	Knewton: CH 7, CH 8.1 **Due Fri 10/22**
5 10/25 – 10/31	Chapter 2 (ionic) – 2.7, 2.8 Chapter 9 – 9.1, 9.2 Chapter 4 – 4.1, 4.4 Chapter 3 – 3.1 **Quiz 3** **10/28 5pm – 10/29 11:59pm**	Lab 5: Periodic Trends	Knewton: CH 8, CH2 (Covalent), CH 9.3, 9.5 **Due Fri 10/29**
6 11/01 – 11/07	Chapter 3 – 3.1, 3.2 Chapter 4 – 4.1 Chapter 10 – 10.1 **Quiz 4** **11/04 5pm – 11/05 11:59pm**	Lab 6: Moles & Empirical formula	Knewton: CH 2(ionic), CH 9.1, 9.2, CH 4.1, 4.4, CH 3.1 **Due Fri 11/05**
7 11/08 – 11/14	Chapter 10 – 10.2, 10.3 **Exam 2** **11/11 5pm – 11/12 11:59pm**	Lab 7: Ionic Compounds	Knewton: CH 3.2, CH 4.1, CH 10.1 **Due Fri 11/12**
8 11/15 – 11/21	Chapter 11 – 11.1, 11.2, 11.3 Chapter 3 – 3.3 Chapter 4 – 4.3 **Quiz 5** **11/18 5pm – 11/19 11:59pm**	Lab 8: Lewis Structures	Knewton: CH 10.2, 10.3, CH 11.1 **Due Fri 11/19**
9 11/22 – 11/28	Chapter 4 – 4.2, 4.4, 4.6 **No Quiz**	No in Person Lab Virtual Lab 9: Molecular Modeling	Knewton: CH 11.2, 11.3, CH 3.3 **Due Fri 11/26**
10 11/29 – 12/05	Chapter 3 – 3.4 **Quiz 6** **12/02 5pm – 12/03 11:59pm**	Lab 10: Chemical Reactions	Knewton: CH 4.3, 4.2, 4.4, 4.6 **Due Fri 12/03**
11 12/06 – 12/12	**Exam 3 (Final)** **Tues, 12/07 5pm – 12/08 11:59pm**		Knewton: CH 3.4 **Due Wed 12/08** Knewton Last day: **Wed 12/08**