Linn-Benton Community College

Albany Campus
6500 Pacific Blvd SW, Albany, OR 97321

CH223 General Chemistry 3 (5 credits) Spring 2022

CRN	Live Zoom Lecture	Instructor
40171	Monday 9:30 am - 10:50 am	Beth Manhat manhatb@linnbenton.edu
43275	Monday 12:30 pm - 1:50 pm	

- 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
43657	Tuesday 8:00 am - 10:50 am, MH 214	Beth Manhat manhatb@linnbenton.edu
43658	Tuesday 11:30 am - 2:20 pm, MH 214	
43659	Tuesday 3:00 pm – 5:50 pm, MH 214	

Labs will meet Week 1. Masks are currently NOT required on campus. This has the possibility of changing as a campus policy. Continue to use the same lab notebook and goggles from previous terms. If the notebook is full, you will need to purchase an additional lab notebook. Goggles can be loaned for 1 lab only.

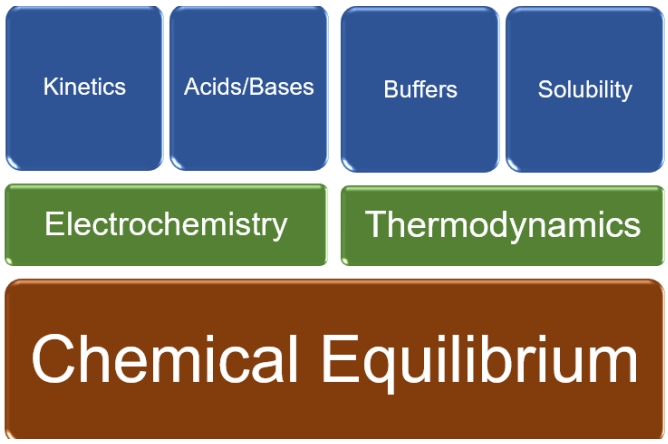
Manhat Drop-in Study Hours				
Monday	**Tuesday**	**Wednesday**	**Thursday**	**Friday**
5:00-6:00pm	None (lab day)	2:00-3:00pm	by appointment	10:00am-11:00am

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

Check Linn-Benton email daily. One weekly summary email will be sent to your LBCC account Monday. 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:
CH223 is the 3rd in a 3-course sequence. It is recommended for natural science and pre-professional degree seekers. We will cover:

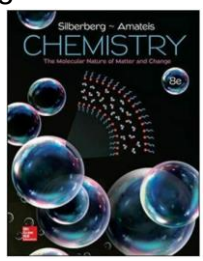


Workload Expectation: Most students earning an "A" put **12-15 hrs/week** into this class. This includes lecture and lab time, reviewing concepts with the textbook/other resource, practicing problems, and completing homework and lab assignments.

Prerequisite: MTH-111 with a grade of "C" or better. CH222 with a grade of "C" or better; **Corequisite:** CH223-Lab

Instructional Materials:

1. Chemistry: The Molecular Nature of Matter and Change, 9th or 8th Ed., Silberberg
   This e-book was included in CH221/222 at LBCC. *If you did not take a previous Gen. Chem. course at LBCC, the textbook is a **D**igital **D**irect **A**ccess and you must opt in.* Directions for textbook access is found on Moodle.
2. Knewton Alta Online Homework: $44.*95 if you did NOT take a previous Gen. Chem. course at LBCC*. Directions for Knewton access is found on Moodle.
3. Bound Duplicate lab notebook (Continue same one from CH222).
4. Lab goggles (Use same pair from CH222 Lab).
5. Scientific Calculator
6. Download & familiarize yourself with Zoom, Adobe Scan

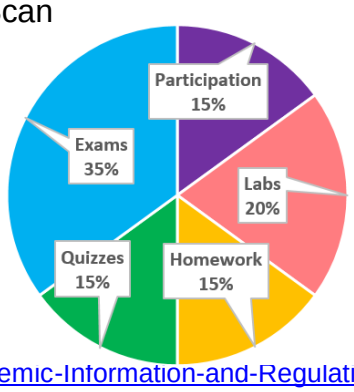


Assessment Criteria and Methods of Evaluation:

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 (4, 15% total):

- Quizzes are designed to help students keep up with material prior to exams
  5 content quizzes 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 type 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.
- You are required to schedule **one 1-on-1 Zoom meeting between exams 2 and 3**.
- 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: completed in lab notebook and 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 ½ -point deduction up to a week
  - Late post-labs will be accepted with 2-point deduction up to a week
  - Pre- and post-labs may be accepted after week for up to 50% credit with instructor discretion.
  - Not turning in a pre-or post-lab will result in a zero for the assignment.
- You can miss up to two in-person labs and have sample data supplied in order to complete the post-lab assignment for 85% credit. Additional missed lab sessions will result as a 0 for the post-lab assignment. Contact your lab instructor to discuss missed in-person labs.

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-223

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. Explain factors affecting reaction rates using collision theory, analyze and solve reaction mechanisms using chemical kinetics.
2. Solve scientific problems and apply chemical principles associated with chemical equilibrium.
3. Distinguish between types of acids and bases, apply equilibrium concepts to acids and bases, and solve acid-base equilibrium problems.
4. Differentiate the types of aqueous ionic equilibrium and evaluate equilibrium problems.
5. Solve scientific problems associated with thermodynamics while applying equilibrium and thermochemistry principles.
6. Solve scientific problems associated with electrochemistry while applying thermodynamic principles.
7. Perform general chemistry experiments, analyze recorded data, and evaluate the data 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.

CH223 Spring 2022 Tentative Schedule

Drop Date: 04/04/22 Withdraw Date: 05/15/22

Week	Lecture – Monday (Zoom) Quiz/Exam: Thurs-Fri Final: Finals Schedule	Lab – Tuesday (on-campus) Pre-lab due: at lab Post-lab due: next lab day, end of day	Homework due 11:59 pm
1 03/28 – 04/03	Chapter 16 – 16.1 - 16.5	Lab 1 – Factors Affecting Reaction Rate	Knewton: CH 16(a) **Due Fri 04/02**
2 04/04 – 04/10	Chapter 16 – 16.6, 16.7 Chapter 17 – 17.1 - 17.3 **Quiz 1** **04/07 5pm – 04/08 11:59pm**	Lab 2 – Crystal Violet Reaction Order	Knewton: CH 16(b) **Due Fri 04/08**
3 04/11 – 04/17	Chapter 17 – 17.4 - 17.6 Chapter 18 – 18.1 **Quiz 2** **04/14 5pm – 04/15 11:59pm**	Lab 3 – Equilibrium Constant $Fe[SCN]^{+2}$	Knewton: CH 17(a) **Due Fri 04/15**
4 04/18 – 04/24	Chapter 18 – 18.2, 18.3, 18.9, 18.5 **Exam 1** **04/21 5pm – 04/22 11:59pm**	Lab 4 – Le' Chatelier's Principle	Knewton: CH 17(b) CH18(a) **Due Fri 04/22**
5 04/25 – 05/01	Chapter 18 – 18.4, 18.6, 18.7 Chapter 19 – 19.1	Lab 5 – Acid/Base Equilibrium and Salts	Knewton: CH 18(b) **Due Fri 04/29**
6 05/02 – 05/08	Chapter 19 – 19.1, 19.2 **Quiz 3** **05/05 5pm – 05/06 11:59pm**	Lab 6 – Buffer Solutions	Knewton: CH 18 (c) CH 19(a) **Due Fri 05/06**
7 05/09 – 05/15	Chapter 19 – 19.2, 19.3 **Quiz 4** **05/12 5pm – 05/13 11:59pm**	Lab 7 – Polyprotic Acid Titration	Knewton: CH 19(b) **Due Fri 05/13**
8 05/16 – 05/22	Chapter 19 – 19.3, cont. Chapter 20 – 20.1, 20.2 **Exam 2** **05/19 5pm – 05/20 11:59pm**	Lab 8 – Intro to Thermodynamics	Knewton: CH 19(c) **Due Fri 05/20**
9 05/23 – 05/29	Chapter 20 – 20.2, 20.3, 20.4 Chapter 21 – 21.1	Lab 9 – K_{sp} and Thermodynamic	Knewton: CH 20(a) **Due Fri 05/27**
10 05/30 – 06/05	***05/30. Memorial Day – No Zoom Meeting*** Chapter 21 – 21.2, 21.3, 21.4 **Quiz 5** **06/02 5pm – 06/03 11:59pm**	Lab 10 – Electrochemistry	Knewton: CH 20(b) **Due Fri 06/03**
11 06/06 – 06/08	**Exam 3 (Final)** **Tues, 6/07 5pm – 6/08 11:59pm**	No lab meeting or assignment	Knewton: CH 21 **Due Wed 06/08** Knewton Last day: **Wed 06/08**

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