

## CH223 General Chemistry 3 (5 credits), Summer 2021

### Chemistry 223 Zoom Lecture

CRN	Live Zoom Lecture	Instructor
12652	Tuesday 12:00-1:20 pm	Beth Manhat <a href="mailto:manhatb@linnbenton.edu">manhatb@linnbenton.edu</a>

- Our class will meet Tuesdays, as listed above. You are required to attend the Zoom lecture for this class. I will provide weekly information, work targeted problems, and provide practice for students. Additionally, you will be asked to present “mini-lectures” to the class.
- 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 223 on Campus Lab \*Every other Week\*

CRN	Lab Day/Time	Instructor
15993	Wednesday 11:00-1:20 pm MH-214	Beth Manhat <a href="mailto:manhatb@linnbenton.edu">manhatb@linnbenton.edu</a>

- 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/virtual lab.
- There is a required lab kit for CH223 available at LBCC bookstore.
- On campus: partitions are constructed in the lab. Masks are required. Use a lab notebook + goggles. Goggles are available for use, but I could suggest having your own.

### Drop-in Study Hours

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

- I will help you with any concepts, problems, lab, or work additional examples together.
- 1:1 meetings are also available (1 required between Exam 1 & 2) – see link on Moodle



**Check Linn-Benton email daily.** A weekly summary will be emailed at the start of each week. I check email often but allow reasonable time for replies. Use appropriate subjects for convenience since we will email often.

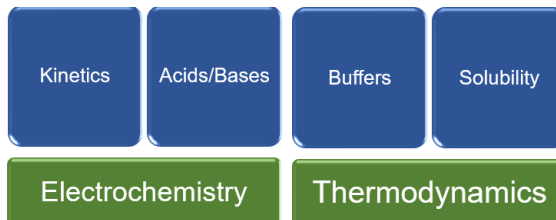


**All lecture and lab items will be posted & submitted via Moodle (LBCC online platform).** Lecture notes, lecture videos, homework, labs, exams, and quizzes will be available on Moodle. You can access it through MyLBCC [here](#).

**Prerequisites:** CH 222 General Chemistry with a grade of “C” or better and MTH 111 College Algebra with a grade of “C” or better. Corequisite: CH 223L General Chemistry Lab.



**Course Description:** CH223 is the 3<sup>rd</sup> in a 3-course sequence. It is recommended for natural science and pre-professional degree seekers. We will cover:

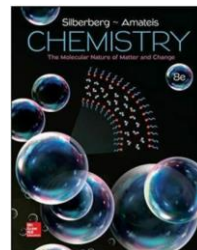


# Chemical Equilibrium

**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*, 8<sup>th</sup> Ed., Silberberg (Redshelf). This e-book was included in the previous chemistry class at LBCC. If you did not take CH222 at LBCC, the textbook is a **Digital Direct Access** & is included in your tuition unless you opt-out.
2. Knewton Alta Online Homework: \$44.95 if you did NOT take a previous chemistry class at LBCC.
3. CH223 lab kit; available at LBCC bookstore (All students)
4. Lab Notebook (Continue same one from CH222)
5. Scientific Calculator
6. Download & familiarize yourself with the Adobe Scan and Zoom apps



### Assessment Criteria and Methods of Evaluation:

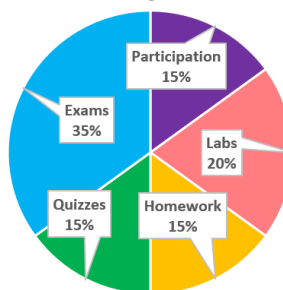
#### **Tentative Grade Distribution:**

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 and Final: 5pm Thurs–11:59pm Fri

#### **Quizzes (4, 15% total):**



- Quizzes are designed to help students keep up with material prior to exams
- 5 chemistry quizzes 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 type 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 Thursday 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):**

- Attending lecture, participating in group work, your 1-on-1 meeting, and completing the weekly assignments during the term will count towards your class participation.
- It is imperative to maintain a safe learning environment with unconditional respect. Engage with the videos, HW, textbook, lab materials, & each other.
- Each student is assigned to a Work Group. This groups aims 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.
- **Each group will conduct a presentation during a given zoom meeting. During week 1, you will be asked for general availability and you and your group will decide how to accommodate the work based on the assigned week.**
- Each student is required to schedule **one 1-on-1 Zoom meeting** with me between Exam 1 and 2. You are welcome and encouraged to schedule additional 1-on-1 meetings.

**Labs (10, 20% total)**

- There are 2 types of labs:
  - In-person labs (4): 12 students may attend an on-campus lab.
  - Virtual labs (6): No formal meeting. Online simulations, videos, data, or at-home labs.
- 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. Submit prelab and watch lab videos prior to attending in-person labs or accessing virtual data.
  - Post-lab assignments, due: next Wednesday 11:59 pm.
- Passing CH223 requires passing the lab section with a > 70%.
  - Late pre-labs will be accepted with 0.5pt 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.

**Student Learning Outcomes:**

1. Solve scientific problems with quantitative methods regarding rates of reactions, chemical equilibrium, thermodynamics, and electrochemistry.

2. Apply chemical principles related to chemical kinetics, rates and mechanisms of chemical reactions, equilibrium, thermochemistry, and electrochemistry

1.3. 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-223>

**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](http://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 2<sup>nd</sup> Monday of the term. To withdraw from the class, drop the class by the end of the 7<sup>th</sup> 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](http://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 Summer 2021 Tentative Schedule

Drop Date: 07/05/21

Withdraw Date: 08/15/21

<b>Week</b>	<b>Lecture – Tuesday (Zoom)</b> All Quiz/Exam: Thurs-Fri	<b>Lab – Wednesday</b> Pre-lab due: Tues 11:59pm Post-lab due: next week 11:59pm	<b>Homework</b> due 11:59 pm Thursday
<b>1</b> 6/28 - 07/04	<u>Chapter 16</u> – 16.1, 16.2, 16.3, 16.4, 16.5  <b>Quiz 1</b> 07/01 5pm – 07/02 11:59pm	<b>Group A and B:</b> Lab 1 Gen Chem Review	
<b>2</b> 07/05 - 07/11	<u>Chapter 16</u> – 16.6, 16.7 <u>Chapter 17</u> – 17.1, 17.2, 17.3  <b>Quiz 2</b> 07/08 5pm – Fri, 07/09 11:59pm	<b>Group A:</b> Lab 2 Crystal Violet <b>Group B:</b> Lab 3 Alka-Seltzer	CH 16 Knewton Due Thurs 07/08
<b>3</b> 07/12 - 07/18	<u>Chapter 17</u> – 17.4, 17.5, 17.6 <u>Chapter 18</u> – 18.1, 18.2 <b>Group lecture (1)</b>  <b>Exam 1</b> 07/15 5pm – 07/16 11:59pm	<b>Group A:</b> Lab 3 Alka-Seltzer <b>Group B:</b> Lab 2 Crystal Violet	CH 17(a) Knewton Due Thurs 07/15
<b>4</b> 07/19 - 07/25	<u>Chapter 18</u> – 18.3, 18.9, 18.5, 18.4, 18.6 <b>Group lecture (2)</b>	<b>Group A:</b> Lab 4 Le'Chatelier <b>Group B:</b> Lab 5 Acid/Base	CH 17(b) Knewton Due Thurs 07/22
<b>5</b> 07/26 - 08/01	<u>Chapter 18</u> – 18.7; <u>Chapter 19</u> – 19.1 <b>Group lecture (3)</b>  <b>Quiz 3</b> 07/29 5pm – 07/30 11:59pm	<b>Group A:</b> Lab 5 Acid/Base <b>Group B:</b> Lab 4 Le'Chatelier	CH 18 Knewton Due Thurs 07/29
<b>6</b> 08/02 - 08/08	<u>Chapter 19</u> – 19.2 <b>Group lecture (4)</b>  <b>Quiz 4</b> 08/05 5pm – 08/06 11:59pm	<b>Group A:</b> Lab 6 Polyprotic Titration <b>Group B:</b> Lab 7 Buffered Solutions	CH 19(a) Knewton Due Thurs 08/05
<b>7</b> 08/09 - 08/15	<u>Chapter 19</u> – 19.2, 19.3 <b>NO ZOOM MEETING THIS WEEK</b> Out of town 08/09-08/11	<b>Group A:</b> Lab 7 Buffered Solutions <b>Group B:</b> Lab 6 Polyprotic Titration	CH 19(b) Knewton Due Thurs 08/12
<b>8</b> 08/16 - 08/22	<u>Chapter 20</u> – 20.1, 20.2, 20.3 <b>Group lecture (5)</b>  <b>Exam 2</b> 08/12 5pm – 08/13 11:59pm	<b>Group A:</b> Lab 8 Solubility and Thermodynamic <b>Group B:</b> Lab 9 Thermodynamics	CH 19(c) Knewton Due Thurs 08/13
<b>9</b> 08/23- 08/29	<u>Chapter 20</u> – 20.4 <u>Chapter 21</u> – 21.1, 21.2 <b>Group lecture (6)</b>  <b>Quiz 5</b> 08/26 5pm – 08/27 11:59pm	<b>Group A:</b> Lab 9 Thermodynamics <b>Group B:</b> Lab 8 Solubility and Thermodynamic	CH 20 Knewton Due Thurs 08/26
<b>10</b> 08/30- 09/04	<u>Chapter 21</u> – 21.3, 21.4  <b>Exam 3 (Final)</b> 09/02 5pm – 09/03 11:59pm	<b>Group A and B:</b> Lab 10 Simulated Electrochemistry Due Friday 09/03  Extra Credit CH223 lab Review Due Friday 09/03 * Late Labs Due Fri 09/03	CH 21 Knewton Due Thurs 09/02 * Late Knewton Due Fri 09/03

**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.