
Chemistry 223 General Chemistry (5 credits) Summer 2020

Lecture CRN: 12652 Lab CRN: 15993

Remote Lecture/Lab Instructor: Dr. Beth Manhat **Email:** manhatb@linnbenton.edu

Zoom Meetings: I will have weekly scheduled Zoom office hours. [Links on Moodle page.](#)

- 1) Monday 10am-11am: I will provide additional problems to solve and work through them to for you to see/ask questions.
- 2) Tuesday 12pm – 1pm & 8pm-9pm
- 3) Wednesday 10am – 11am
- 4) Thursday 12pm – 1pm & 8pm-9pm
- 5) By appointment for one-on-one email or Zoom sessions ([email me to set a day/time](#)).

[Check your Linn-Benton email daily.](#) Class communication will happen weekly to keep us all on pace for the term. Everything will be post everything else on Moodle, such as videos, lecture notes, completed lectures, class documents, homework, labs, and updates to the calendar for exams/quizzes dates and times.

I will check email often. Please use appropriate subjects for convenience since we will email often!

Lecture Structure: [Lecture will be asynchronous](#) – I will **NOT** be live for lectures. I will post multiple videos of my lectures while I go through the PowerPoints in each chapter. I expect that you will watch these videos and take notes as you would in a face-to-face class. Use the other resources I share to prepare yourself as needed.

Workload Expectation: For face-to-face classes, chemistry students are expected to work about 3 hrs per week/credit. Examples of work: reading the text, reviewing lecture materials, practicing problems, performing homework assignments, and completing lab work. [Your time commitment will likely be more like 4-5 hrs per week/credit using strictly online resources.](#)

Required Instructional Materials:

1. *Chemistry: The Molecular Nature of Matter and Change*, 8th Ed., Silberberg (Redshelf). Your textbook is a Digital Direct Access text & was included in your tuition unless you opted-out.
2. Knewton Alta Online Homework: Your account from last term will work. (Cost: \$44.95 if you did NOT take previous chemistry at LBCC).
3. **Lecture Manual: Like a workbook, this takes the place of “traditional lecture notes” for CH223. My video lectures will be based off these pages.**
4. Any Scientific Calculator: You need a calculator for practice problems and to complete quizzes or exams. You can use Google calculator, but I don't recommend it.
5. Download & familiarize yourself with Zoom App (phone or computer) and Adobe Scan.
6. You don't need to buy a lab manual.

Optional Materials: Carbonless Notebook for lab material from last term or other notebook.

Course Description: This is the 3rd class in the 3-course general chemistry sequence, and covers reaction rates, equilibria, acid/base, thermodynamics, and electrochemistry.

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.

Science Help Desk: I have no heard if tutors will be available summer term.

Assessment Criteria and Methods of Evaluation: Tentative Grade Distribution

<u>Activity</u>		<u>Percentage</u>	Grading Scale: You are <u>NOT</u> graded on a curve	
Homework		15	A = 90% – 100%	B = 80% – 89%
Lab	(10)	20	C = 70% – 79%	D = 60% – 69%
Quizzes	(5)	15	F = below 59%	
Exams	(4)	50	An incomplete (IN) may be assigned with instructor discretion and if a student is passing.	

Homework Online (15%): To succeed in chemistry, you should study and practice most days.

- Knewton Online homework is assigned for each chapter and is available on Moodle. All single chapter homework is due at 11:59 pm on due dates.
- Late Homework is accepted with a 15% deduction and can be submitted up to 30 days late. The last day to submit Knewton homework is the night before the final exam.
- Each homework assignment is worth 100 points. All homework assignments in a chapter will be averaged to determine your homework score for a specific chapter.

Quizzes (15%): Quizzes are designed to help students keep up with material and master important topics prior to the exams. 5 quizzes will be hosted on Moodle and will be open from 8am Thursday until 12pm Friday. You will need to dedicate about 40 mins to complete each quiz within that time.

Exams (50% total): Four-chapter exams will be hosted on Moodle and will be open from 8am Thursday until 12pm Friday. You will need to dedicate about 2.5 hrs to complete exams within that time.

- All exams will cover sectioned material, each having multiple choice & short answer questions.
- Exam reviews with answers will be provided on Moodle.

Make-Up Quizzes and Exams:

If you miss a scheduled quiz or exam, it is your responsibility to coordinate a possible make-up. Assessments can be made up within 2 weeks of the original date. Missed quizzes and exams will result in a 0

****Note about Moodle hosted quizzes/exams**** Quizzes and exams will be open notes and book. Each will contain an academic integrity policy in accordance with LBCC. You will need to acknowledge this for each assessment.

You will need to provide explanations/answers to show your understanding of the material and to earn partial credit. You can either type answers and work into the space provided or write work on scratch paper and submit it, just as you would for an in-class quiz/exam. You can submit a photo (.jpeg) of your work OR as .pdf (See pdf directions below).

Class Participation: It is important to maintain a safe learning environment by showing unconditional respect for others. Engage with the videos, other resources, including your Knewton

HW, textbook, lab materials, & each other. Be courtesy to your classmates online as you would face-to-face.

Labs (20% total)

- Each week's lab experiment will be posted as pdf on Moodle.
- Other resources for each week's lab include videos. A pre-lab talk video is posted for each experiment. **You are required to watch the prelab videos, as I provide lab help and experimental changes from the written procedure.**
- Other labs include the actual experimental procedure (by me or other instructors) or online links to help. Some labs may have mock-up data for you to use OR collect from home.
- Lab reports will be like those you prepared for CH221 and CH222. Options include 1.) typing your report (.doc) or writing it in your lab notebook and submitting photos (.jpeg) or a pdf
- Each lab has an assignment box on Moodle to submit your lab report. Ensure your photos or pdf pages are in correct order if you choose those options.
- Prelabs are due BEFORE the data videos open. Reports are due 1-week after materials are open. Late labs are accepted 30 days beyond the due date at instructor discretion. Not turning in a lab receives a zero.

Google Scan (android only) or Adobe Scan (android or iphone) – for quiz/exam short answer questions or lab reports

To use Google Scan: On your android phone or portable device, Open Google Drive App, click the + to Add an item, and Tap Scan (it may have a camera icon). Use your camera to take pictures, and the app will convert it to a pdf.

To use Adobe Scan: On your device, download the app. Open it and create an account. Use your camera to take pictures, and the app will convert it to a pdf.

You can submit these files as attachments to your short answer questions or lab reports.

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

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

Drop/Withdraw Policy:

- To withdraw from class, you must file a Schedule Change Form with Registration or WebRunner. To receive a tuition refund, drop the class by the 2nd Monday of the term and not appear on your transcript. To withdraw from the class, drop the class by the end of the 7th week; in which case, it will record as a “W” on your transcript.
- If you stop interaction in 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, contact the appropriate office to determine what effects occur from dropping a course. Contact the Financial Aid Office by calling (541) 917-4850.

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 in order to receive accommodations. If you believe you may need accommodations but are not yet registered with CFAR, please visit the CFAR website www.linnbenton.edu/cfar for steps on how to apply for services, or call 541-917- 4789.

Course Content and Outcome Guide:

<http://linnbenton.smartcatalogiq.com/current/Catalog/Courses/CH-Chemistry/200/CH-222>

LBCC Grading Guidelines

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

Student Code of Conduct/ Rights and Responsibilities

<https://www.linnbenton.edu/current-students/administration-information/policies/students-rights-responsibilities-and-conduct.php>

CH223 Summer 2020 Tentative Online Schedule

Week	Lecture Material Quiz/Exam – Due Thur-Fri	Lab Material Prelab – Due Wedn Lab reports – Due Mon	Knewton HW Due Wedn
1 6/29 - 07/05	<u>Chapter 16</u> – 16.1, 16.2, 16.3, 16.4, 16.5 Quiz 1 Thurs, 07/09 8am – Fri, 07/10 12pm	Review for CH222 material Due Mon 07/06 11:59 pm	
2 07/06 - 07/12	<u>Chapter 16</u> – 16.6, 16.7 <u>Chapter 17</u> – 17.1, 17.2, 17.3 Quiz 2 Thurs, 07/09 8am – Fri, 07/10 12pm	Exp 1. Alka seltzer OR Iodine Clock (TBD) Due Mon 07/13 11:59 pm	CH 16 Knewton Due Wed 07/08 11:59 pm
3 07/13 - 07/19	<u>Chapter 17</u> – 17.4, 17.5, 17.6 <u>Chapter 18</u> – 18.1, 18.2 Exam 1 Thurs, 07/16 8am – Fri, 07/17 12pm	Exp. 2 LeChatelier's Principle Due Mon 07/20 11:59 pm	CH 17(a) Knewton Due Wed 07/15 11:59 pm
4 07/20- 07/26	<u>Chapter 18</u> – 18.3, 18.9, 18.5, 18.4, 18.6 Quiz 3 Thurs, 07/23 8am – Fri, 07/24 12pm	Exp. 3 Cabbage lab or Acidic Salts (TBD) Due Mon 07/27 11:59 pm	CH 17(b) Knewton Due Wed 07/22 11:59 pm
5 07/27 - 08/02	<u>Chapter 18</u> – 18.7 <u>Chapter 19</u> – 19.1 EXTRA CREDIT Quiz Thurs, 07/30 8am – Fri, 07/31 12pm	Simulation: Acid-Base Titration Due Mon 08/03 11:59pm	CH 18 Knewton Due Wed 07/29 11:59 pm
6 08/03- 08/09	<u>Chapter 19</u> – 19.2 Exam 2 Thurs, 08/06 8am – Fri, 08/07 12pm	Exp 4 Buffer lab Due Mon 08/10 11:59 pm	CH 19(a) Knewton Due Wed 08/05 11:59 pm
7 08/10- 08/16	<u>Chapter 19</u> – 19.2, 19.3 Quiz 4 Thurs, 08/13 8am – Fri, 08/14 12pm	Exp 5. Polyprotic Acid Titration Due Mon 08/17 11:59 pm	CH 19(b) Knewton Due Wed 08/12 11:59 pm
8 08/17- 08/23	<u>Chapter 20</u> – 20.1, 20.2, 20.3 Exam 3 Thurs, 08/20 8am – Fri, 08/21 12pm Rock Candy Extra Credit	Exp. 6 Solubility Product Constant Due Mon 08/24 11:59 pm	CH 19(c) Knewton Due Wed 08/19 11:59 pm
9 08/24- 08/30	<u>Chapter 20</u> – 20.4 <u>Chapter 21</u> – 21.1, 21.2 Quiz 5 Thurs, 08/13 8am – Fri, 08/14 12pm	Exp. 7 Copper Cycle lab Due Mon 08/31 11:59 pm	CH 20 Knewton Due Wed 08/26 11:59 pm
10 08/31- 09/06	<u>Chapter 21</u> – 21.3, 21.4 Exam 4 Thurs, 09/03 8am – Fri, 09/04 12pm	Virtual Electrochemical Cell Assignment Due Fri 09/04 11:59pm Extra Credit CH223 Review *Due Fri 09/04 11:59 pm	CH 21 Knewton Due Wed 09/02 11:59 pm * Late Knewton Due Fri 09/04 11:59 pm

Drop Date: 07/06/20

Withdraw Date: 08/16/20

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.