Chemistry 150—Preparatory Chemistry, Spring 2022 (40330)

Instructor: Ryan McQuade, Ph.D. **E-mail:** ryan.mcquade@linnbenton.edu

Zoom meeting time: **Monday 10:00 AM-11:20 AM** (*via* Zoom)

Lecture: Lectures will be held via zoom; attendance is required for this class. All links and documents are on the course Moodle site. If the lecture is ever interrupted due to technological issues an email will be sent out giving further instructions.

Office Hours: Office hours will be held on Zoom: **Mon 1:30 – 2:30 PM**

Course Description: Introduction to chemistry for science, engineering and the professional health occupations. Designed to meet the prerequisite for CH 221, this fast-moving curriculum covers the basic tools offered in a typical one-year high school chemistry course. A good selection for students who need a refresher in chemistry or have little or no background in chemistry and need to meet the prerequisite for CH 221. Topics emphasized include chemical calculations and problem-solving techniques encountered in both inorganic and organic chemistry. There is no laboratory with CH 150. Chemistry 150 *does not* fulfill the general education science course requirement.

Required Materials:
OpenStax Chemistry 2e Textbook, Digital ISBN 1947172093
Knewton Alta Online Homework Access Code
Non-graphing/programmable Scientific Calculator
Online device for Zoom meetings

Corequisite: Math 95, Intermediate Algebra

Course Format: Class will be synchronous (together) and asynchronous (individual) and directed via the Moodle course for this class. Class lectures are asynchronous; students will watch prerecorded lecture videos at any time prior to class. Class will meet via Zoom once a week (Monday 10 AM). Class time will be divided up between a short introduction period to discuss the video lectures, a quiz, and group work. Some homework will be on the Knewton Alta platform. There are 4 exams in this class with no cumulative final.

Lectures: Lectures will be recorded and then posted to Moodle for students to watch prior to class. Students have the responsibility to ***actively*** watch the lecture videos and take notes just as would be expected in an in-class lecture. Students are responsible for any work assigned in the video lectures. All links and documents are on the course Moodle site.

Attendance: Class attendance is graded and is worth 10% of the total class grade. Half of this is determined by class attendance and the other 5 % will come from a brief weekly quiz of the prior week's material. Successfully attending class includes being present, *with your camera on,* and actively participating in work and discussions.

Homework Problem Sets: Online homework will be assigned for each chapter. Homework will be completed using the Knewton Alta platform through the course Moodle site. Refer to the schedule for homework due dates. Homework is due at 11:59 pm on the due date. **No late homework is accepted.** Additional worksheets and textbook problems will be assigned and will require the submission of a PDF document in Moodle.

Worksheets: Worksheets will be available alongside the video lectures. Discussing and working collaboratively with other students will assist in a more complete understanding of the material.The worksheet problems are effective practice for exams and assist with keeping students up to date with material. Worksheet due dates will be assigned in class and displayed on the Moodle course site. **No late or make-up worksheets are accepted. Unless otherwise specified, worksheet require completed, hand-written work to receive credit.** If you have an issue with completing an assignment before the due date please contact me *before the due date*, and I *may* give an extension.

Exams: All exams this term will be taken online in the Moodle course site outside of class hours (generally Fridays). There are 4 exams (please see course schedule for details) and there is no final exam. Students must complete the exam within the given time window.

Calculator Policy: Students will be required to use a non-graphing/programmable scientific calculator for quizzes and/or exams. Department approved calculators are: TI 30xa, TI 30X IIs, Casio fx-260, or HP 10s. If a student does not wish to purchase one of these calculators the department will provide either a Casio fx-260 or HP 10s for use on exams and/or quizzes.

Student Learning Outcomes:

1. Use mathematical reasoning with dimensional analysis while applying rules of significant figures.
2. Use the Periodic Table to recognize and explain; (a) the differences between, (b) the formation of, and (c) the naming of covalent and ionic compounds.
3. Explain the relationships and perform calculations using moles, individual particles, and mass.
4. Balance chemical reactions and perform stoichiometric calculations in problem solving.
5. Perform calculations using a variety of concentrations such as mass percent and molarity in connection with solution stoichiometry.

Student Help Desk: The Student Help Desk assists students with most computer software-related issues and other technology problems or questions, from login problems related to LBCC's online systems to questions about course-related instructional software. The Student Help Desk is now remote! Contact info can be found here

Science Help Desk: If you need help in any physics or chemistry course, you should "drop by" the Physical Science Desk, now offered online! The Help Desk is staffed approximately 20 hours per week. Please visit Science Help Desk webpage for details and hours. https://www.linnbenton.edu/student-services/library-tutoring-testing/learning-center/science-support.php

Textbook: Good news: your textbook for this class is available for free online! If you prefer, you can also get a print version at a very low cost. Your book is available in web view and PDF for free. You can also choose to purchase on iBooks or get a print version via the campus bookstore or from OpenStax on Amazon.com. You can use whichever formats you want. Web view is recommended -- the responsive design works seamlessly on any device. If you buy on Amazon, make sure you use the link on your book page on openstax.org so you get the official OpenStax print version. (Simple printouts sold by third parties on Amazon are not verifiable and not as high-quality.) Chemistry from OpenStax, Print ISBN 194717262X, Digital ISBN 1947172611, https://openstax.org/details/books/chemistry-2e

Homework Problem Sets: Online homework will be assigned for each chapter. Homework will be completed using the Knewton Alta platform through the course Moodle site. Refer to the schedule for homework due dates. Homework is due at 11:59 pm on the due date. **No late homework will be accepted.**

Instructions to Sign Up for Knewton Alta online homework:

1. For access, log-on to Moodle and navigate to the course site. Dont go directly to the Knewton website, use the Moodle link!
2. Click on any homework assignment activity (green puzzle icons) to launch Knewton.
3. Click **Purchase** and then choose **One-Time Purchase** or **Redeem Access Code**. The access codes are also available at the bookstore. Students pay $44 for 2 years of access. There is also an option to get courtesy access for 14-days.

If you have issues with Knewton, you can use the feedback button, the online chat, or email support@knewton.com.

Worksheets: Worksheets for each section will become available on Moodle with the accompanying lecture video. You will be assigned to different groups and will work on the worksheets collaboratively as a group. Talking about the problems with other students will help all of you understand them better. Note that the students must have some accountability for their individual learning in order for groups to work effectively. The instructor will monitor student's performance and make sure all the group members are actively participating in the discussions. The worksheet problems are good practice for exams. **No late or make-up worksheets will be accepted.**

(more on next page)

Grading/Point Distribution:

Assignments	**Percentage**
Knewton Homework	15%
Quiz / Attendance	10%
Worksheets	15%
Exams (4), 15% each	60%
Total	**100%**

Course Grade:

Percentage	**Letter Grade**
90-100%	A
80-89%	B
70-79%	**C**
60-69%	D
0-59%	F

An incomplete grade (I) may be given at the discretion of the instructor. However, a student must have a passing grade (≥70 %) at the time an incomplete is assigned.

Please check your grades often! All grades from individual assignments and exams are viewable on Moodle. However, **the class/grade totals Moodle calculates are inaccurate** and do not reflect the the final grades. The above grade breakdown is used to determine the current grade. If you have grade questions at any point, please contact me and we can discuss it.

Drop/Withdraw Policy: If a student wishes to withdraw from the class, a Schedule Change Form will need to be filed with Registration or using WebRunner. If a student formally drops the class **by Monday of the second week of the term**, that student will receive a full refund of tuition. If a withdrawal is filed after the Monday of the second week of instruction through the seventh week, a **'W'** will show up on the student's transcript. No withdrawals are allowed after the end of the seventh week. An instructor may not assign a "W" grade.

Students receiving financial aid and/or veteran's benefits should speak with the associates at the appropriate office to determine what effects on eligibility dropping a course will have. Don't jeopardize your eligibility! The Financial Aid Office can be reached at (541) 917-4850, and the Financial Aid Office can be found in Takena Hall.

If a student stops attending the course without formally withdrawing, that student will continue to accumulate grades (zeroes for all assignments not turned in) and will receive the grade assigned by the instructor based on the cumulative score for all assignments. Students will be held accountable for all charges on their accounts if a withdrawal is not filed.

Zoom Etiquette: Follow proper etiquette. We may not be face-to-face, but you should treat the experience as if you are face-to-face with myself and your fellow students. Some key points:

- Be respectful.
- Find a quiet place for our zoom lectures.
- Mute your microphone if you are not talking.
- Keep distracting visuals to a minimum.
- Use the chat feature.

The following links may be helpful regarding Zoom etiquette and how to use Zoom.

https://www.psychologytoday.com/us/blog/do-the-right-thing/202003/top-10-tips-good-zoom-hygiene-and-etiquette-in-education
https://atguides.humboldt.edu/m/zoom/l/752185-how-do-students-use-zoom
https://zoom.us/docs/doc/Student%20Tips%20for%20Participating%20in%20Online%20Learning.pdf

How To Be Successful In This Class (see "Keys to Success" document)

- **Set aside scheduled time to work on homework, studying, and watching the video lectures. In non-standard classroom environments more responsibility is placed on the student to keep up with the classwork. Do not fall behind!**

- Come to class on Mondays prepared for the material. Being prepared includes actively watching and engaging with the video lectures by working on problems in the video lecture and then by completing assignments. Questions about the topics and problems may then be address in class.

- **Practice, practice, and then practice again.** New problems and techniques require practice in order to fully comprehend. Remember: Learning is an active process and no amount of watching videos will impart the understanding required to succeed.

- Attend all weekly Zoom classes.

- Review the syllabus and learn policies and procedures for this class.

- Attempt all problems in all assignments! Partial credit may be given if work is shown. If you struggle with an assignment, you may visit the Science Help Desk, contact me for assistance, ask on the discussion forums, review the textbook, search online, or work with other students, etc.

- Check your LBCC email regularly, and make sure that Moodle announcements are sent to your email. All communications for this class should be directed through LBCC email.

- Actively monitor your grades and assess how to improve your performance.
- Please inform me immediately, or prior whenever possible, of issues that may limit your class participation and/or ability to do assignments. I may be able to work with you on a solution as long as the assignments are not past the due date.

Course Evaluations: Student feedback is important to improve this course and to help the instructor know how to adjust teaching methods. Student feedback is taken seriously and does impact future versions of the course. The Student Evaluations of Teaching (SET's) are anonymous and will be done the 8th or 9th week of class, in class. The process takes approximately 10 minutes and it is highly encouraged to take this opportunity to provide constructive feedback on the class. Thank you in advance for your input!

Center for Accessibility Resources: You should meet with 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 at http://www.linnbenton.edu/cfar for steps on how to apply for services or call 541-917-4789.

(*more on next page*)

Course Schedule: The schedule below includes a tentative list of textbook sections to be covered, along with the *homework due dates* and **dates of exams**.

Week	Dates (M) 10AM-11:20AM	Covered Course Material (Chapter)	Assessments
1	3/28	Syllabus, 1.1 – 1.3	
2	4/4	1.4, 1.5, Dimensional Analysis	
3	4/11	1.6	**CHAPTER 1 EXAM**
4	4/18	2.1 – 2.4	
5	4/25	2.5 -2.7	**CHAPTER 2, 7.3 EXAM**
6	5/2	7.3	
7	5/9	3.1, 3.2	
8	5/16	3.3, 3.4	**CHAPTER 3 EXAM**
9	5/23	4.1 – 4.3	
10	5/30	4.4, 4.5	
11	TBD		**TBD: CHAPTER 4 EXAM**

****Note:** **This schedule of topics, homework due dates, and exam dates is tentative, and subject to change at the instructor's discretion.** Online homework due dates are to be submitted by 11:59 pm on that date.

Academic Integrity: It is expected you act with academic integrity in mind. No form of academic dishonesty will be tolerated, and each instance will be reported. "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 Adminstrative Rule No. 7030-01. Please see the College policy on Students' Rights Responsibilities and Conduct:

Students Rights, Responsibilities, and Conduct Policy: LBCC students have rights: the right to free speech, the right to assemble, the right of a free press, etc. LBCC students also have responsibilities to their community: the responsibility to participate and engage in class, the responsibility to advocate for their needs (ask for help), the responsibility to support a respectful teaching and learning environment, the responsibility to treat all persons with respect, the responsibility to be truthful and honest in all work and communications, and the

responsibility to follow staff directions, local, state, and federal laws. Rights and responsibilities balance together to create the best learning environment. For example, while you have free speech in the café or courtyard, in class the instructor decides whose turn it is to talk and what the topics for conversation will be. Students are free to believe what they believe, but instructors may require students to learn and recite concepts, principles, or theories for a class even if the student does not believe those concepts. You play a role in creating a positive community at LBCC. Please review your rights and responsibilities at this link: https://www.linnbenton.edu/about-lbcc/administration/policies/student-rights-responsibilities-and-conduct.php

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 1015.