**Chemistry 150 Preparatory Chemistry (3 credits) Winter 2020**

**CRN: 32294** Tuesday/Thursday 2:00-3:20pm - MH-208

**Lecture:** Beth Manhat, Ph.D **email:** manhatb@linnbenton.edu

**Office:** MH 212 **Office Hours:** TDB

Please check the syllabus and Moodle for general class information. I regularly check email regularly (less on weekends, use appropriate subjects.), so allow 24 hrs for a response. Class documents, including notes, homework, and announcements, will be posted on Moodle. The Moodle calendar is used for due dates for homework and exams/quizzes.

**Course Description:** CH150 provides an introduction for science, engineering, and professional occupations. This course is a prerequisite for the General Chemistry series (CH 221-3) and has a fast-moving curriculum emphasizing chemical calculations and problem-solving techniques encountered in inorganic and organic chemistry. We will cover basic tools offered in a typical one-year high school chemistry course or will act as a refresher in chemistry for those with little or no background in chemistry. There is no lab with CH 150. Note: This course does NOT fulfill general science course requirements.

**Workload Expectation:** Students taking chemistry courses are expected to work a minimum of 3 hours/week outside of class for every credit hour, including but not limited to reading the text, reviewing lecture materials, practice problems, and completing homework.

**Required Instructional Materials:**

1. [Chemistry 2e from OpenStax](https://openstax.org/details/books/chemistry?Book%20details) (free)
* OpenStax is a FREE site for textbooks in web view or pdf.
* Print ISBN 194717262X, Digital ISBN 1947172611
* Visit this link for our text: <https://openstax.org/details/books/chemistry-2e>
* Print versions are available at the library reserve. Text is available to purchase on iBooks or from OpenStax on Amazon.com. On Amazon, make sure to use the link on the book page on openstax.org to get the official OpenStax print version.

2. Knewton’s Alta Online Homework Access Code (44.95$)

3. Non-graphing/non-programmable Scientific Calculator (examples: TI 30xa, TI 30X IIs, Casio fx-260, or HP 10s). Some TI 30xa are available for use on exams and/or quizzes.

 **Prerequisites:** MTH95 (Intermediate Algebra) or equivalent placement test scores

**Science Help Desk:** The Science Help Desk is located on the first floor of Madrone Hall in the atrium area. The Help Desk is staffed approximately 20 hours per week. Hours of the Help Desk are posted throughout Madrone Hall and in the Help Desk area.

**Assessment Criteria and Methods of Evaluation:**

**Tentative Grade Distribution
Activity Percentage**In class work 10

**Grading Scale:** The course is
NOT graded on a curve.

A = 90% – 100%

 B = 80% – 89%

 C = 70% – 79%

 D = 60% – 69%

 F = below 59%

Homework 20
Quizzes (4) 20

Midterm exams (3) 30
Final Exam (1) 20

A grade of incomplete (IN) may be assigned with instructor discretion AND may only be assigned at a time in which the student has a passing grade.

**In class work (10%):** It is important to maintain a safe learning environment by showing unconditional respect for others. This is demonstrated by listening to each other and taking one and other seriously. Being involved in group work on problems and lecture engagement. Be courteous concerning electronic use and food.

**Homework Online and Worksheets (20%):**

Problem solving is essential to mastering concepts, and successfully completing chemistry. Homework will all be graded and count towards your grade – **THIS IS A GREAT STUDY TOOL!** Homework includes Online Knewton and worksheets.

* Online homework will be assigned for each topic we cover using Knewton. Each assignment is accessible through a link on Moodle and is due at 11:59 pm on the due date (Mondays or Wednesday). Late Homework will be accepted with an automatic deduction of 15% and can be submitted up to 1 week late.
* Each online homework assignment is worth 100 points. All homework sections per chapter will be averaged to determine your homework score.
* Knewton is adaptive to each learner. If you don’t get consecutive correct answers, the system thinks you have not mastered a topic; therefore, it will give you more problems at you. If this happens, please get help from your instructor to avoid frustration.
* For your first log on, you will need to create an account and enter an access code. You can purchase this access code online or at the LBCC bookstore. Knewton Alta offers a grace period on for payment; this is 14 days from the first day of the term. Note: You do NOT need to purchase an additional Knewton codes in CH221 at LBCC.
* Worksheets will be posted to Moodle in the appropriate folder. Students can print the worksheet, or answer the questions by .pdf, .doc, or by hand. Completed homework should be turned in by the start of the class on the day it is due to the front of class or Moodle submission. Late homework may be accepted after the due date with instructor discretion.

**Quizzes (20%):** There are **5 quizzes** given at the start of class, as listed on the schedule. The quizzes will cover specific topics from the lectures. The top four scores will count toward your grade (so one is dropped).

**Exams (50% total):** There will be 3 Mid-term Exams and 1 Final Exam, as listed on the schedule in class. Chemistry is naturally cumulative, and you will find an overlap of material through the term. Mid-terms cover chapter material and will consist of multiple choice and open ended (calculations, explanations, drawing-related questions, etc). I provide exam reviews with answers on Moodle. The final exam is cumulative.

*Make-Up Quizzes and Exams:*

If you know you will be missing a quiz or exam in advance (> 1 week), you can schedule a make-up exam and quiz in the testing center (RCH-111).

You can schedule a one-time missed exam/quiz in the testing center (RCH-111).

It is your responsibility to coordinate contact the instructor as to the date you will complete the make-up.

**Possible Extra credit Opportunities:**

1. [Strategies for Success Workshop](https://www.linnbenton.edu/current-students/study/learning-center/college-skills-zone/): This workshop is organized by the College Skills Zone where you will learn and practice the organizational strategies, study strategies, effective textbook reading, and efficient test preparation. These skills are important in order to be successful in college, especially in chemistry class. Students who sign up and attend this 50-minute workshop before Exam 1 will receive 5 points extra credit on Exam 1.

2. Homework: It is possible if time becomes short on a topic its corresponding Knewton HW can become extra credit (applies to homework score only.)

3. Small amounts (< 5 points) may be available on exams on a case by case basis, but do not expect it to be available every exam.

**How to Be Successful in this Course**:

* Attendance**:** Students are expected to attend lecture. Student copies of notes are provided on Moodle and I suggest that you have them in class. I do not post my completed powerpoint slides.
* Follow along with lecture instead of looking at other material (such has homework).
* We work problems and answer questions in class. When given time to solve problems during class, please attempt to solve the problems.
	+ Talk with students at your table about the problems
	+ If you struggle here, the Learning Center in the library is your best asset
* I provide tips, tricks, and hints in class, but YOU are responsible for your progress.
* Attempt all assignments. If you struggle with an assignment, you can ask other students in the class, visit the Science Help Desk, or visit to office hours.
* Chapter Study Guides and Extra Practice are also available on Moodle.
* When studying for exams, try to work through problems on your own before looking at the solutions. Redo the lecture problems, redo the paper homework problems, and work through the sample exam problems.

## **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

**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](https://www.linnbenton.edu/faculty-and-staff/administrative-information/policies/board-policies-and-administrative-rules/1000-series-the-college/board-policy-series-number-1050-equal-opportunity-statement.php). 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.

**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 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 or visit the Financial Aid Office in Takena Hall.

**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 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/en/current/Catalog/Courses/CH-Chemistry/100/CH-150>

**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>

**CH150 Winter 2020** Tentative Schedule

**Quiz and Exam dates are NOT TENATIVE.**

|  |  |  |
| --- | --- | --- |
| Week | Lecture (T, Th) | Homework |
| **1** | T 01/07 – Introduction, Syllabus, Chapter 1 (1.1)Th 01/09 – Chapter 1 (1.2-5) | 3 Knewton AssignmentsWorksheet HW 1 |
| **2** | T 01/14 – **Quiz 1**, Chapter 1 (1.5-1.6)Th 01/16 – Chapter 1 (1.6) | 4 Knewton Assignments |
| **3** | T 01/21 – Chapter 1 (1.6), Chapter 2 (2.1)Th 01/23 – **Exam 1**, Chapter 2.2 | 6 Knewton AssignmentsWorksheet HW 2 |
| **4** | T 01/28 – Chapter 2 (2.3-.4)Th 01/30 – **Quiz 2**, Chapter 2 (2.5-.7) | 5 Knewton Assignments |
| **5** | T 02/04 – Chapter 2 (2.5-.7), Chapter 7 (7.3)Th 02/06 – **Quiz 3,** Chapter 2 (cont.) | 3 Knewton Assignments |
| **6** | T 02/11 – Chapter 2 (cont.)Th 02/13 – **Exam 2**, Chapter 3 (3.1) | 4 Knewton AssignmentsWorksheet HW 3 |
| **7** | T 02/18 – Chapter 3 (3.2)Th 02/20 –Chapter 3 (3.3) | 4 Knewton Assignments |
| **8** | T 02/25 – **Quiz 4,** Chapter 3 (3.4)Th 02/27 – Chapter 3 (cont.) | 6 Knewton AssignmentsWorksheet HW 4 |
| **9** | T 03/03 – **Exam 3**, Chapter 4 (4.1)Th 03/05 – Chapter 4 (4.1-4.3) | 6 Knewton Assignments |
| **10** | T 03/10 – **Quiz 5,** Chapter 4 (4.3-4.5)Th 03/12 – Chapter 4 (cont.) | 8 Knewton AssignmentsWorksheet 5 |
| **Finals Week** | T 03/17 - **Final Exam**- 4:30pm- 6:20pmTh 03/19 – no class |  |
|  | Drop Date: 01/13  | Withdraw Date: 02/22 |

**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.