Chemistry 221 General Chemistry Winter 2020
(5 credits)

CRN: 31946 Tuesday & Thursday 12:00-01:50pm (Location: MH-208)

Instructor: Meilianty Gunawan
Email: gunawam@linnbenton.edu
Office Hours: Tues & Thurs (9:00-10:00am)
Office location: MH-211

CRN	Instructor/Office/Email	Lab Day/Time	Location
33862	Shawn McDonald	W 8:00-10:50	MH 206
33860	Shawn McDonald	W 11:00-01:50	MH206
33864	Beth Manhat	W 2:00-4:50	MH 206

For general class information, please check the syllabus and Moodle first. Class documents, including notes, homework, and announcements, will be posted on Moodle.

Course Description: This is the 1st in a 3-course sequence (CH221, CH222 and CH242). This course is recommended for chemistry and other natural science and pre-professional degree seekers. This course will cover measurements, classification and properties of matter, nomenclature, atomic structure and the periodic table, solution chemistry and chemical reactions, and introduce gas laws, thermodynamic principles, and quantum relationships.

Student Learning Outcomes:

1. Differentiate the historical developments leading to the development of the atomic theory and the Periodic Table.
2. Solve scientific problems with quantitative methods using dimensional analysis and/or algebra regarding unit conversions, stoichiometry, gas laws, and thermochemistry.
3. Apply chemical principles associated with chemical and physical changes and properties of matter, nomenclature, chemical reactions, thermochemistry, the kinetic theory of a gas, and quantum theory.
4. Work safely in a laboratory environment while observing and accurately recording measurements related to chemical phenomena.

Required Instructional Materials:

1. *Chemistry: The Molecular Nature of Matter and Change,* 8th Ed., Silberberg (redfin, Moodle) The textbook is a **D**igital **D**irect **A**ccess text and is included in your tuition unless you opt-out. Access to the text can be found on the course Moodle website.
2. Knewton Alta online homework access (44.95$/year if you did NOT take CH150 at LBCC)
   - To Sign Up for Knewton:
     - Log into Moodle and navigate to the course.
     - Click on any homework assignment to launch Knewton.

- Click **Purchase** and then choose **One-Time Purchase** or **Redeem Access Code**. The access codes are available at the bookstore. There is also an option to get courtesy access for 14-days.
- For issues with Knewton, you can use the feedback button, the online chat, or email support@knewton.com.

3. Non-graphing/programmable Scientific Calculator
   - You will need a non-graphing/programmable calculator. Department approved calculators are TI 30xa, TI 30X IIs, Casio fx-260, or HP 10s. If a student chooses not to purchase a calculator, either a Casio fx-260 or HP 10s are available for use on exams and/or quizzes.
4. Chemistry 221 Lab Manual (LBCC Bookstore, $5.50)
5. Carbonless Lab Notebook

Optional Materials: 1. Lab coat 2. Personal Safety Goggles

Prerequisites: MTH95 (Intermediate Algebra) and any one of the following:
- a passing score on the chemistry entrance exam;
- CH 150 with a grade of "C" or better;
- CH 121 with a grade of "C" or better;
- CH 112 with a grade of "C" or better.

Corequisite: CH221L, MTH111

Assessment Criteria and Methods of Evaluation:

Activity		Percentage
Homework		10
Lab		20
Quizzes	(5)	10
Mid-term Exams	(3)	40
Final Exam	(1)	20

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%

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.

Homework: Online Homework and Worksheets (10%):
Online homework will be assigned for each chapter. Homework will be completed using Knewton through Moodle. 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.

Quizzes (10%): The quiz problems are good practice for exams and help students keep up with material. 6 quizzes will be given throughout the term (see the schedule for quiz dates). The lowest quiz score will be dropped from your final grade. Each quiz is about 20 mins of duration.

Exams (60% total): There will be 3 Mid-term Exams and 1 Final Exam (refer to the schedule of the Exams in Page 5). Mid-term and Final Exams will consist of multiple choice and short answer questions (calculations, explanations, drawing-related questions, or the like). The Mid-term Exam is around 45 mins of duration while Final Exam is 1 hr 45 mins of duration.

Make-Up Exams: If you will miss an exam, you must provide documentation of College function, illness and/or family emergency must be provided to schedule a make-up exam with the instructor. The make-up quiz/exam will be done in the testing center (RCH-111). It is your responsibility to coordinate contact the instructor as to the date you will complete any make-up assessment.

Labs (20% total)

- Students arriving to lab after the lab's introduction (~ 15 mins) may not be allowed to remain in the lab that day. You could miss important changes to the lab or safety information
- Open-toe shoes are NOT allowed in lab. Anyone wearing open toe-shoes is required to leave and will be given a zero for the lab.
- Labs are due by the **beginning of the next lab in class after the completion of the experiment.** Late labs accepted for with 10% markdown per day (up to a week late).
- You must pass the laboratory section with a 70% to pass this course. Missing 3 labs will result in an automatic failure of the course. Failing to turn in a lab assignment counts as a missed lab
- Your lowest lab score will be dropped from your grade. There are no makeup labs.
- You must attend the lab period to get points for the lab.
- Additional Lab Information will be given during your first lab meeting.

How to Be Successful in this Course:

- Attend every single class. Arrive on time and stay for the entire class.
- Follow along with lecture instead of looking at other material during class/homework.
- We work problems and answer questions in class. When given time to solve problems during class, do attempt to solve the problems.
- Talk with students at your table about the problems
- Complete all assignments (paper and online homework). If you struggle with an assignment, you can see me during my office hours, ask other students in the class or visit the Science Help Desk
- 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.
- Check your LBCC email regularly, and make sure that Moodle announcements are sent to your email.

Science Help Desk: The Science Help Desk is located on the first floor of Madrone Hall in the atrium area. The opening hours of the Help Desk are posted throughout Madrone Hall and in the Help Desk area.

Class Participation: 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

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.

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

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.

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.

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

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.

CH221 Winter 2020 Schedule

Week	Lecture (T, Th)	Lab (W)	HW
1	01/07 – Syllabus, 1.1-1.4 01/09 – 1.4, 2.1	Safety, Lab Format, Sig Figs & Naming Review	
2	01/14 – 2.1-2.5 01/16 – ***Quiz 1,*** 2.5-2.7	Exp. 1 Density of Crayons	*Ch 1 Knewton* *Due Wed (01/15)*
3	01/21 – 3.1-3.2 01/23 – ***Exam 1 (CH 1 & 2)***, 3.3	Exp. 2 Formula of a Hydrate	*Ch 2 Knewton* *Due Wed (01/22)*
4	01/28 – 3.3-3.4 01/30 – ***Quiz 2,*** 3.4, 4.1	Exp. 3 Household Chemicals	
5	02/04 – 4.4 02/06 – ***Quiz 3,*** 4.2-4.3	Exp. 4 Vinegar Lab	*Ch 3 Knewton* *Due Wed (02/05)*
6	02/11 – 4.5, 5.1 02/13 – ***Exam 2 (CH 3 & 4)***, 5.3	Exp. 5 Chemical Reactions	*Ch 4 Knewton* *Due Wed (02/12)*
7	02/18 – 5.3-5.5 02/20 – ***Quiz 4***, 5.5-5.6	Exp. 6 Gas Constant	
8	02/25 – 6.1-6.2 02/27 – ***Quiz 5***, 6.3-6.5	Exp. 7 Specific Heat of Pennies	*Ch 5 Knewton* *Due Wed (02/26)*
9	03/03 – 6.6-7.1 03/05 – ***Exam 3 (CH 5 & 6)***, 7.1	Exp. 8 Hess's Law	*Ch 6 Knewton* *Due Wed (03/04)*
10	03/10 – 7.2-7.3 03/12 – ***Quiz 6***, 7.3-7.4	Review for Final	*Ch 7 Knewton* *Due Mon (03/16)*
11	**Final Exam** March 17th 12:30 – 2:20 pm Venue: MH-208	No lab	*Last Knewton* *Mon (3/16)*

Drop Date: 01/13/20 Withdraw Date: 02/22/20