CH 222 Spring, 2022

Instructor: Nandini Das (She/her)

Email: dasn@linnbenton.edu

CRN 41833 (12-1:20 pm)

https://linnbenton.zoom.us/j/99678740962 **Passcode: 355803**

Office Hours: Wednesday (7-8 pm)

https://linnbenton.zoom.us/j/91447639750 Passcode: 153783

I enjoy teaching and talking with you. If you have questions or just have an idea you want to explore, come by my office hours. If none of the times work for you, feel free to email me and we can set up a time that does.

Course Values:

You are **required to meet every Tuesday** for a live Zoom session and **watch the videos** posted before attending the zoom session. I encourage you to **attend class every time it meets** to get the full picture of the content we are exploring together and **have your camera on and participate to create a sense of harmonious community in the class.** Please let me know if you are unable to attend class and follow up with a classmate to be sure you know what material you missed. Students who miss more than two classes often find it more difficult to keep up with the coursework.

Class Participation (10%):

Students are assigned to a group during the zoom session. The purpose of the group is to facilitate learning through collaboration with peers. The groups will work on a “Participation Worksheet” every Tuesday. If a student misses a zoom session, 10 out of 50 points will be deducted from the “Participation Worksheet” points for that week.

Knewton Alta

Knewton Homework (15%)

- Graded homework is via Knewton, an online homework platform. Individual assignments are listed by chapter on Moodle, and are **due Fridays 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 14 days late.

Lab Requirement (20%)

Passing CH222 requires passing the lab section with a > 70%.

Late pre-labs will be accepted with 1/2 pt deduction up to a week.

Late post-labs will be accepted with 2 pt 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.

You can miss up to two in-person labs and have sample data supplied in order to complete the post-lab assignment for 85% credit. Additional missed labs will count as a 0. Communicate with your instructor to discuss this option.

Grading:

Assignments	Percentage
Metacognition & Prep. Quiz	**5%**
Knewton Homework	**15%**
Participation (lowest one drops)	**10%**
4 Quizzes (lowest one drops)	**20%**
Lab	**20%**
Midterm	**15%**
Final Exam	**15%**
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Total	**100%**

Course Grade:

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

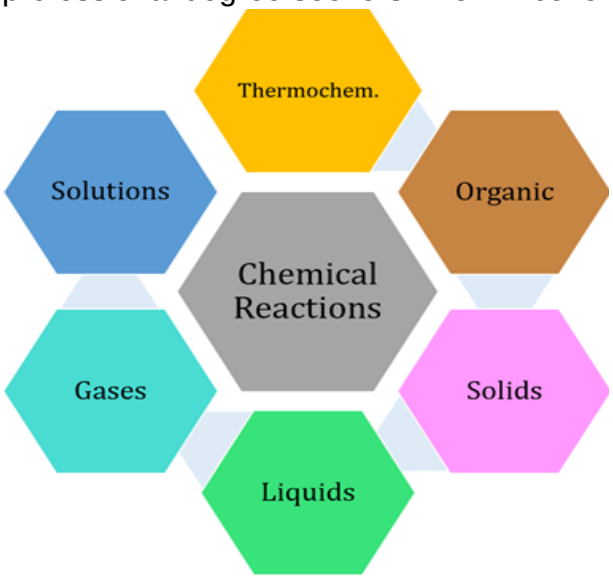
An incomplete grade (I) may be given at the discretion of the instructor. However, a student must have a passing grade (≥70 %) at the time an incomplete is assigned.

Exams: All quizzes and exams this term will be taken online in the Moodle course site. Check your schedule for the time window. Quizzes and exams are open notes/open books. Open ended questions require you to show your work for credit. You can type work into the space provided in Moodle. You can also show your work on papers. If you use paper, use a picture/pdf program on your phone or scanner and submit the work.

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. Please see the College policy on Students' Rights Responsibilities and Conduct: https://www.linnbenton.edu/about-lbcc/administration/policies/board-policies-and-administrative-rules/7000-series-student-services/ar-7030-01.php

Course Description:

CH222 is the 2nd in a 3-course sequence. It is recommended for natural science and pre-professional degree seekers. We will cover the topics below in the following manner.



learning Outcomes

1.Define and apply thermochemistry quantities and perform calculations involving thermochemistry.

2. Investigate conceptual relationships and solve mathematical problems of gasses.

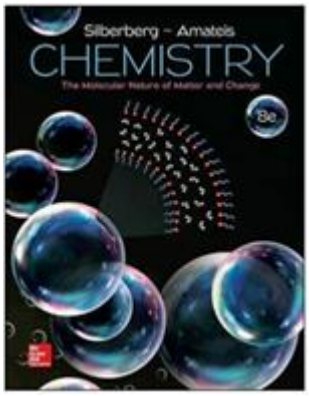
3. Classify types of intermolecular forces and relate them to physical properties of solids and liquids while solving scientific problems involving phase transitions.

4. Describe solution concepts and factors affecting solution properties while performing solution concentrations calculations.

5. Demonstrate and distinguish organic chemistry concepts using general chemistry principles.

6. Perform general chemistry experiments, analyze recorded data, and evaluate the data while working safely in a laboratory environment.

Required Materials:

1. **Text book**: The Molecular Nature of Matter and Change, 9th or 8th Ed., Silberberg This e-book was included in CH221 at LBCC. Directions for textbook access are found on Moodle. 

2. **Knewton Alta Online Homework**: $44.*95* if you did NOT take CH150 or CH221 at LBCC.
    a. Log-on to Moodle and navigate to the course site.
    b. Click on any homework assignment (green puzzle icons) to launch Knewton. The third step is only applicable to students who don't have it already.
    c. Click **Purchase** and then choose **One-Time Purchase** or **Redeem Access Code**. You can also get a 14-day courtesy code by using link https://support.knewton.com/en/s/article/Starting-Assignments-Without-Purchasing-an-Access-Code
3. Bound Duplicate **lab notebook** (Continue same one from CH221)
4. **Lab goggles** (Use same pair as you did in CH221 Lab)
5. **Scientific Calculator**

Course Requisite: MTH-111 with a grade of "C" or better. CH221 with a grade of "C" or better; **Corequisite:** CH222-Lab

Drop/Withdraw Policy:

- If you are withdrawing from the class, 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 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 1015.

How To Be Successful In This Class:

- Attend all weekly Zoom meetings. Have your camera on and participate to create a sense of harmonious community in the class.
- Be prepared for meetings by watching the videos and reading/working through the textbook chapters to be covered in class.
- Review the syllabus to understand the policies and procedures for this class.
- If you struggle with an assignment, email me, attend a study session, visit the Science Help Desk, or sign up for tutoring.
- Check your LBCC email regularly. Understand your rights and responsibilities as a student and as a class member.
- Follow proper Zoom etiquette. https://atguides.humboldt.edu/m/zoom/l/752185-how-do-students-use-zoom

Student Help Desk: **If you need help with technology problems**, from login problems related to LBCC's online systems to questions about course-related instructional software. Contact info can be found here

Science Help Desk: If you need help in any physics or chemistry course, use link https://www.linnbenton.edu/student-services/library-tutoring-testing/learning-center/science-support.php

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.

Flexibility Statement: This schedule is tentative, and subject to change at the instructor's discretion.

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.
Please use this link for further review: https://www.linnbenton.edu/about-lbcc/administration/policies/student-rights-responsibilities-and-conduct.php

Course Schedule:

Week	Dates	Lecture Material	Knewton Homework Due Fri at 11:59 PM	Assessments
1	3/28 - 4/3	3.4 4.(4-7) 6.(1-2)		
2	4/4 - 4/10	6.(3-4-5-6)	CH 3, 4 (1-2-3-5) **Due Fri 4/8**	**Quiz 1** **Available** **4/8 - 4/9** **1 pm - 11:59 pm**
3	4/11 - 4/17	5. (1-2-3-4)	CH 6 (1-2-3-4-5-6) **Due Fri 4/15**	
4	4/18 - 4/24	5. (5-6) 15. (1-2)	CH 5 (1-2-3-4) **Due Fri 4/22**	**Quiz 2** **Available** **4/22 - 4/23** **1 pm - 11:59 pm**
5	4/25 - 5/1	15. (3-4)	CH 5 (5-6) CH 15 (1-2) **Due Fri 4/29**	**Midterm** **Available** **4/29 - 4/30** **1 pm - 11:59 pm**
6	5/2 - 5/8	12. (1-2-3)	CH 15 (3-4) **Due Fri 5/6**	
7	5/9 - 5/15	12. (4-5-6)	CH 12 (1-2-3) **Due Fri 5/13**	**Quiz 3** **Available** **5/13 - 5/14** **1 pm - 11:59 pm**
8	5/16 - 5/22	13. (1-2-3)	CH 12 (4-6) **Due Fri 5/20**	
9	5/23 - 5/29	13. (4-5-6)	CH 13 (1-3-4) **Due Fri 5/27**	**Quiz 4** **Available** **5/27 - 5/28** **1 pm - 11:59 pm**
10	5/30 - 6/5	Review	CH 13 (5-6) **Due Fri 6/3**	
11	6/6 - 6/12	FINAL		**Final Exam** **6/7 - 6/8** **9 am - 11:59 pm**

Lab Schedule:

Week	Dates	Labs
1	3/28 - 4/3	Check-in, Safety, Lab 1: Limiting Reactant
2	4/4 - 4/10	Lab 2: Calorimetry
3	4/11 - 4/17	Lab 3: Thermodynamic Titration
4	4/18 - 4/24	Lab 4: Hess ‘s law
5	4/25 - 5/1	Lab 5: Gas laws
6	5/2 - 5/8	Lab 6: Esterification
7	5/9 - 5/15	Lab 7: TLC and Beer’s law
8	5/16 - 5/22	Lab 8: Phase changes
9	5/23 - 5/29	Lab 9: Intermolecular Forces
10	5/30 - 6/5	Lab 10: Freezing Point
11	6/6 - 6/12	No lab meeting or assignment