CHEM 100 Chemistry in Society
3 Credits
CRN 61118, 61147
WWW

INSTRUCTOR: Leticia Colmenares, Ph.D.
E-MAIL: leticia@hawaii.edu
OFFICE HOURS: MW 10:30-11:30 am, TR 11:30-12:30 am
Online Chat Laulima Thursday 7-8 pm
OFFICE Imiloa 116 (Windward Community College)
TELEPHONE: 808-236-9120
EFFECTIVE DATE: Spring 2016

WINDWARD COMMUNITY COLLEGE MISSION STATEMENT

Windward Community College offers innovative programs in the arts and sciences and opportunities to gain knowledge and understanding of Hawai‘i and its unique heritage. With a special commitment to support the access and educational needs of Native Hawaiians, we provide O‘ahu’s Ko‘olau region and beyond with liberal arts, career and lifelong learning in a supportive and challenging environment — inspiring students to excellence.

CATALOG DESCRIPTION

Chemistry 100 provides a survey of basic concepts and applications of chemistry in the real world. This course is suitable for students who had little or no background in chemistry and serves to fulfill a general education physical science core course for the non-science major or as a preparatory course for Chem 151.

Chem 100L (1-credit) laboratory course is available this semester. Registration is separate (CRN 61173). This satisfies DY requirement for AA degree.

STUDENT LEARNING OUTCOMES

1. Describe the relationship between properties and structure of matter.
2. Name chemicals, balance chemical and nuclear equations.
4. Identify the types of chemical reactions (i.e. acid-base, redox, nuclear) and their applications to everyday lives.
5. Explain the chemistry of household chemicals, and the composition of air and water.
6. Relate a specific chemical concept to a current environmental, health, industrial, or technological issue by writing a short research paper.
COURSE TASKS

- Weekly quizzes (online)
- Weekly individual and group assignments (online)
- Discussion Board Postings (online)
- Research Paper (online)
- Two Midterm Exams (Testing Center)
- Final Exam (Testing Center)

GRADING

Grades will be based on the following:

<table>
<thead>
<tr>
<th>Task</th>
<th>Points</th>
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<tbody>
<tr>
<td>Scavenger Hunt Activity</td>
<td>10</td>
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<tr>
<td>Chapter Assignments (11 best out of 12)</td>
<td>110</td>
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<tr>
<td>Quizzes (11 best out of 12)</td>
<td>110</td>
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<tr>
<td>Research Paper (1)</td>
<td>70</td>
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<tr>
<td>Discussion Posts (2)</td>
<td>20</td>
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<tr>
<td>Midterm Exams (2)</td>
<td>220</td>
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<td>Final Exam</td>
<td>120</td>
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<td>Total</td>
<td>660</td>
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IMPORTANT: The two midterm and final exams will be proctored at the WCC Testing Center. You may use testing centers found in this link: [http://www.hawaii.edu/dl/testcenters](http://www.hawaii.edu/dl/testcenters) or if you are in the US mainland, you may use other testing centers in your locality. If you wish to take these exams at other locations, please email the instructor by the second week of classes for pre-approval.

Course grades will be assigned as follows:

- 594-660 total points = A
- 528-593 total points = B
- 462-527 total points = C
- 396-461 total points = D
- below 396 = F

N Grade: The 'N' grade indicates that the student has worked conscientiously, attended regularly, finished all work, fulfilled course responsibilities, and has made measurable progress but has not achieved the minimal student learning objectives and is not yet prepared to succeed at the next level. Or, the student has made consistent progress in the class but is unable to complete the class due to extenuating circumstances, such as major health, personal or family emergencies. **Students requesting for N grade must provide a formal letter of request before the final examination with supporting evidences.**

The other grades I, W, Cr, NC to be assigned are described in the current college catalog. These options must be discussed with the instructor. The deadline to change from A-F to Cr/NC/audit option ([with Office of Admissions & Records](http://www.hawaii.edu/dl/testcenters)) is on Mar 29, 2016.

If you drop out from the course without any notice, you will get ‘F’ grade. To avoid this, please be sure to withdraw officially ([through MyUH](http://www.hawaii.edu/dl/testcenters)) by Mar 29, 2016.
LEARNING RESOURCES

1. **REQUIRED TEXT. Instructor Lecture Notes** (spiral bound, Spring 2015 edition)
   Must purchase at the WCC Bookstore, about $8. Order and check shipping policies at [http://www.bookstore.hawaii.edu/wcc](http://www.bookstore.hawaii.edu/wcc)

2. **Optional text:** *Chemistry in Changing Times* by Hill and Kolb, 2010, 12th edition—[buy used copy online](http://www.bookstore.hawaii.edu/wcc)

3. Calculator (required) & Periodic Chart

4. Course website: [https://laulima.hawaii.edu](https://laulima.hawaii.edu)

5. Multimedia found in course website (under *Laulima Modules*)

6. Chapter assignments (60% group-based, 40% individual)

7. Practice quizzes & exams in Assignments, Tests & Surveys (*Laulima ATS*)

8. Supplemental instruction in Blackboard Collaborate (schedule to be announced later)
The link is: [http://tinyurl.com/WCC-Elluminate-Room-1](http://tinyurl.com/WCC-Elluminate-Room-1)

9. *Laulima* Chat Room Instructor online hours every Thursday at 7-8 PM. Feel free to post questions anytime.


11. OLA (Online Learning Academy), online tutoring open everyday except Saturday. [http://manoa.hawaii.edu/ola/](http://manoa.hawaii.edu/ola/)

**HOW TO STUDY FOR THIS COURSE**

*Usually students take online courses with the assumption that it will be easier than face-to-face classes. Unfortunately this is NOT correct. Online courses actually require more discipline and individual effort on the part of the student. The focus is on YOU learning rather than the TEACHER lecturing.* However, you have more flexibility, when and where to study.

1. Please pay attention to deadlines. **Use the Course Schedule** (found on the last page) throughout the semester. You are expected to MEET ALL DEADLINES as listed on the class schedule. There is a quiz (10 points) and an individual assignment (4 points) due **every Sunday at 11:59 pm**. There is a group assignment due **every Tuesday** (6 points).

2. You are expected to **login the course website** at least every other day. The website is your classroom and not coming to the site is like skipping class. You are expected to spend at least eight hours a week for this course. Please schedule **real-time** hours that you will routinely follow, **example:** MWFS 7-9 pm.

3. Focus on the **objectives of each chapter.** You are expected to do ALL the **Learning Checks** and **Self-Assessment** in each chapter (in Instructor Notes). If your Notes from the bookstore have not yet arrived, please download and print the chapters found in *Laulima Modules*. Still, you have to purchase the actual Notes to have complete information.

4. In addition to the **Notes, multimedia materials** are used to deliver course content in the course website. These include voice over powerPoints, videos, animations, mp3 audios, Quicktime movies and interactive websites. All the downloadable files and links are found under *Laulima Modules*. 
5. **Have a notebook.** Take notes when reading the Notes, when watching videos, tutorials, and animations. If you don’t write your notes, you will forget the material when you reach the final exam.

6. **Weekly assignment.** You are expected to do the assignment at the end of each chapter. In general, each blank in the assignment corresponds to a one-word answer. Upload your individual work in *Laulima Assignments* by the due date (11:55 pm Sunday). Your score will be zero if you don’t submit your **individual assignment** by the due date.

After the individual assignments are turned in, all members in a group are expected to discuss the assignment with each other in Laulima Discussion. The group final answers must be posted in **Discussion** by the due date (11:59 pm Tuesday). The assignment is worth 10 points (4 points based on individual submission and 6 points based on group submission). Only one submission (the first one in case of multiple submissions) per group is allowed in Discussion. All members who participate in the group discussion will receive the same group score for the group assignment. If you don’t participate in the group discussion, your score will be zero.

7. **Weekly quiz.** You are expected to take the **practice quiz at least twice** before the actual online quiz to build confidence. The **actual quiz** is randomized from a quiz pool.

8. If you have any problems, please do not hesitate to see or email your instructor for consultation. **Online office hours at 7-8 pm** will be held in the Chat Room every Thursday. Face-to-face consultation at the start of the semester is highly recommended if this is your first time taking an online class. Please take the first step to inform the instructor if this is your first time.

9. You are recommended to attend **supplemental instruction (SI) sessions** or tutoring during the semester. You will receive 0.5 extra credit points per session. The **online supplemental instruction is available at** [http://tinyurl.com/WCC-Elluminate-Room-1](http://tinyurl.com/WCC-Elluminate-Room-1). The OLA online tutoring, [http://manoa.hawaii.edu/ola/](http://manoa.hawaii.edu/ola/) is available everyday except Saturdays and State holidays. Students should use tutoring from the very beginning of the semester before running into difficulty.

10. You should plan to spend at least 8 hours per week on this course (remember, you’re not physically attending a class or spending time traveling to and from campus!). Here is how your time will be allocated during most weeks:
- two hours reading *Notes*, and doing learning checks and self-assessment
- two hours viewing online video lectures and websites
- two hours doing **homework assignment and group discussion**
- one hour attending SI session/chat room/OLA tutoring
- one hour taking practice quiz, preparing your cheat sheet and taking the **actual quiz**

11. Back up all your submissions.
POLICIES

1. **Online weekly quizzes.** Access the weekly quiz through Laulima Assignment, Tests and Surveys. Each chapter quiz consists of ten multiple-choice questions. The quiz will be available every week from **Friday 1AM to Sunday at 11:59PM.** All times are Hawaii Standard Time. You may take the quiz anytime within this period. You are expected to move on to the next chapter as soon as you are done with a quiz.

If you encounter a technical problem (e.g., the computer crashes, Laulima is down, etc.), **please submit a Request Assistance** form (at the bottom of each Laulima page) immediately from the computer that the problem occurred. Please indicate the course (CRN), which quiz, what kind of computer, which web browser, and what kind of internet connection was used. Please notify me immediately before the deadline has passed. Upon verification of malfunction by Laulima staff, I will reset the quiz and you will be allowed a second attempt. However, please make sure that your Internet connection is a robust connection when taking online quizzes. Please do NOT take your quiz at the coffee shop or using wireless connection.

Make-up or retaking quizzes is NOT allowed. **Each quiz MUST be completed by the time and date set in the course schedule.** If you fail to take a quiz, for whatever reason, your score for that quiz will be zero. In calculating your course grade, the **lowest quiz score will be dropped.**

The quiz will be timed (10-20 min depending on the questions). The quiz will automatically close when the time limit is reached. Always have a calculator and a periodic chart ready before you begin the quiz. You are allowed to use a cheat sheet. You may NOT open your Lecture Notes or textbook. The reason why the quiz is timed is to prevent cheating.

After taking the quiz, check your score in the gradebook. After the quiz is closed, click ‘Review’ to see the answer key.

2. Each midterm exam will cover approximately 40% of the material of the course. The final exam will be cumulative covering ALL topics taken throughout the semester. **Check the course schedule for the dates.**

The two midterm and final exams will be made available for 3 days at the WCC Testing Center (TTC) or external testing site approved by the instructor.

**Important.** A picture ID is required and no cell phones will be allowed. The midterm and final exams are closed books and notes (no cheat sheet). Please bring your own calculator to the testing center. The proctored exams will be timed, 75 min for midterm and 2hrs for the final. The proctor at the testing site will input the password for the midterm and provide you with a periodic table.

Hours of operation may vary from campus to campus. At the WCC Testing Center, the hours are found in this link: [http://windward.hawaii.edu/Testing_Center/index.php](http://windward.hawaii.edu/Testing_Center/index.php)
After taking the exam, you must not tell anybody what is in the test, as this would fall under the guidelines of academic integrity. Any evidence of cheating will result in a score of zero for all parties involved, and this will be reported to the Vice Chancellor for disciplinary action.

3. **Assignments.** There are a total of 12 assignments and 2 discussion posts (see list below). The assignments are downloadable from *Laulima Modules* from each chapter. In calculating your course grade, the lowest assignment score (out of 12) will be dropped.

**How to submit individual assignment.** The individual assignment should be saved in .doc or .docx or .pdf but **NOT** in .txt or .wps. or .pages **IMPORTANT. If you are using a word-processing software other than Microsoft word, please convert your submission to .pdf so it can be opened and graded.** Label the file with your family name and assignment number and upload in Laulima “Assignments” as attachment. The individual assignment is due every **Sunday 11:55 pm** (upload in Assignments). Each individual assignment is worth 4 points.

**How to submit group assignment.** After the individual assignments are turned in (Sunday midnight), all members in a group are expected to discuss the assignment with each other in Discussion. Before Tuesday midnight, the group final answers must be posted in Discussion. All members who participated will get the same group score. Each group assignment is worth 6 points. Each group must have only one group submission in Discussion. In case there are multiple submissions, only the first one will be recognized. Instructor feedback will be posted in Discussion.

4. The **scavenger hunt assignment is mandatory.** Please do this as soon as possible. It is very important that you become familiar with the tools in the course website: Assignments, Tests & Surveys, Gradebook, Modules, Discussion, Assignment, and Chat Room. Please download it from *Laulima Modules*, answer it, save it and upload in Assignments.

5. **Discussion Posts must be posted in Discussion (Laulima).** Student interactions are required. You must comment on two other postings, and, respond to those about your post. Please be respectful to everyone at all times. Please remember when online to follow netiquette rules. Avoid flaming: [http://www.albion.com/netiquette/corerules.html](http://www.albion.com/netiquette/corerules.html)

Two discussion postings (individual) will be required, 10 points @):

- #1- Chemistry in the news
- #2- Application of a chemical reaction in everyday life

The grading rubric is as follows:

- Posting is focused, organized, and clearly conveys ideas to reader (3 pts)
- Posting shows integrates concepts from the notes, text or multimedia (3 pts)
- Well-developed, use own words and stimulates discussion (2 pts)
- Interacted timely at least twice in a thoughtful and respectful way (2 pts)
6. The **research paper** is a three-page (double space) paper of at least 750 words to make a connection between a chemistry concept and an application/issue in everyday life. This will be made based on textbook readings and online resources. A sample paper and a handout “tips on how to search for references” will be provided.

Research paper topics need to be pre-approved by **Mar 20, 2016** (at the latest by **email**). Topics like the Kreb’s cycle, Glycolysis, or Prebiotics, etc, (textbook topics in nutrition, biology and zoology, etc courses) and topics already tackled in extra credit and sample paper are **NOT acceptable**.

Submit the draft and final paper in http: turnitin.com. This is free of charge and this helps prevent plagiarism. If this is your first time using this website, please create an account and register. Course ID: **11430030** and Password: Colmenares

Instructor will give **feedback if** paper was submitted **one week before due date** (**Apr 24, 2016**). Paper may be revised and resubmitted on the deadline (**May 1, 2016**).

The paper grade will be based on the following rubrics:

- contains title and purpose (10 points)
- explains correctly at least one chemistry concept in detail (10 points)
- discusses at least one application or current issue in detail (10 points)
- effectively connects the chemistry concept to application (10 points)
- information is technically sound and coherent (10 points)
- well-organized and body has correct length (at least 750 words) (5 points)
- no errors in spelling, grammar and use of English (5 points)
- citations (in–text) are included (5 points)
- reference list (at the end) of at least five reliable sources is included (5 points)

7. **Extra Credit.** You can earn extra credit up to a **maximum of 20 points**.

   - Correct response to classmates’ question in the Chat Room is 0.5 point each.
   - Extra credit essays (uploaded in **Laulima Assignments**).
   - Attendance in supplemental instruction or online tutoring will earn 0.5 point per session.
   - Scoring 80% or higher in the **practice** midterm and practice final will earn 2 points @ with unlimited attempts.
   - Attendance and one-page reflection paper in chemistry forum is 4 points each.

The dates of the chemistry forum will be posted at [http://www.wcc.hawaii.edu/chemistry_forum](http://www.wcc.hawaii.edu/chemistry_forum).

8. **Communicating with instructor.** Questions about the class procedures should be posted in the Chat Room. For other matters, please email the instructor using the **Mailtool** in Laulima. Please **check your Hawaii.edu** account for instructor response to your email. Please ALLOW 24 HOURS for responses to emails or messages. In emergencies, please call 236-9120.

9. Please review the FAQ’s. When in doubt, please **ASK.** If you notice any discrepancies, please be the first to notify the instructor.
**MySuccess REFERRAL**

At Windward community college we want every student to be successful. MySuccess is a system wide effort that seeks to support students early in the semester when they first begin experiencing difficulty in class. If I feel that you're having difficulty in my class within the first few weeks of the semester (e.g. missing class, missing assignments, or low test scores) and working together to address your challenges shows that you would really benefit from being connected to resources outside of the classroom, I may refer you to your assigned counselor. Once referred, MySuccess will:

- Call you and send an email to your [Hawaii.edu](mailto:hawaii.edu) account to let you know about my referral; and
- Have a Counselor follow up with you by phone or by email to find out what kinds of help you might need and connect you with the necessary resources to help you devise a strategy for success.

I will not refer you without telling you. However, if I do refer you, know that I am doing so in an effort to connect you with all of the help you may need to do well this semester as your success is important to me.

**DISABILITIES ACCOMMODATION**

If you have a physical, sensory, health, cognitive, or mental health disability that could limit your ability to fully participate in this class, you are encourage to contact the Disability Specialist Counselor (and instructor) to discuss reasonable accommodations that will help you to succeed in this class. Ann Lemke can be reached at 235-7448 or [lemke@hawaii.edu](mailto:lemke@hawaii.edu) or you may stop by Hale 'Akoakoa 213 for more information.

**COURSE CONTENT AND SCHEDULE**

Important Dates: 1/15/16 Last day to receive 100% tuition refund  
2/1/16 Last day to receive 50% tuition refund  
3/29/16 Last day to withdraw from class ("W" on transcript)

Please print the course schedule and use the last column to record scores & extra credits.

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Readings</th>
<th>Due Dates 11:55 PM*</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Orientation &amp; Chemistry</td>
<td>Chap1 &amp; 2 Notes Multimedia in Modules</td>
<td>Jan 17 Scavenger Hunt Syllabus Quiz Assign#1 Chaps 1 &amp; 2</td>
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<td>2</td>
<td>Atomic Structure</td>
<td>Chap 3 Notes Multimedia in Modules</td>
<td>Jan 24 Quiz #1Chaps 1 &amp; 2 Assign#2 Chap 3</td>
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<td>3</td>
<td>Chemical Bonds</td>
<td>Chap 4 Notes Multimedia in Modules</td>
<td>Jan 31 Quiz #2-Chap 3 Assign#3 Chap 4</td>
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<td>4</td>
<td>Chemical Accounting I</td>
<td>Chap 5a Notes Multimedia in Modules</td>
<td>Feb 7 Quiz #3-Chap 4 Assign#4 Chap 5a</td>
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<td>Chemical Accounting II</td>
<td>Chap 5b Notes Multimedia in Modules</td>
<td>Feb 14 Quiz #4-Chap 5a</td>
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| **6** | Review Chaps 1 – 5 for Midterm Exam | Feb 21  
Quiz #5-Chap 5b  
Post Discussion #1 |
| **7** | Gases, Liquids, Solids  
Chap 6 Notes Multimedia in Modules | Feb 24-26  
Midterm 1  
Chaps 1-5  
The Testing Center  
Feb 28  
Assign#6 Chap 6 |
| **8** | Acids & Bases  
Chap 7 Notes Multimedia in Modules | Mar 6  
Quiz #6-Chap 6  
Assign#7 Chap 7 |
| **9** | Oxidation & Reduction  
Chap 8 Notes Multimedia in Modules | Mar 13  
Quiz #7-Chap 7  
Assign#8 Chap 8 |
| **10** | Organic Chemistry & Polymers  
Chap 9 & 10 Notes Multimedia in Modules | Mar 20  
Quiz #8-Chap 8  
Assign#9 Chap 9 &10  
Submit Paper Topic |
| **11** | Nuclear Chemistry  
Chap 11 Notes Multimedia in Modules | Mar 27  
Quiz #9 Chaps 9 & 10  
Assign#10 Chap 11 |
| **12** | Review Chaps 6-11 | Apr 3  
Quiz #10-Chap 11  
Post Discussion #2 |
| **13** | Air & Water  
Chap 13 & 14 Notes Multimedia in Modules | Apr 6-8  
Midterm 2  
Chaps 6-11  
Testing Center  
Apr 10  
Assign#11 Chap13 &14 |
| **14** | Household Chemicals  
Chap 21 Notes Multimedia in Modules | Apr 17  
Quiz#11-Chap 13 & 14  
Assign #12 Chap 21 |
| **15** | Research Paper  
References Write research paper | Apr 24  
Quiz#12-Chap 21  
Draft Research Paper Turnitin.com |
| **16** | Review all chapters | May 1  
Final Research Paper Turnitin.com |
| **17** | Cumulative Final Exam  
The Testing Center | May 9-12  
All chapters  
Final Exam Testing Center |
*This syllabus is subject to change. Please bring any error to the attention of the instructor.