CHEM 100 Chemistry in Society
3 Credits
CRN 63130, 63491
WWW

INSTRUCTOR: Leticia Colmenares, Ph.D.
E-MAIL: leticia@hawaii.edu
OFFICE HOURS: M 10:30-11:30 am, T 11:30-12:30 am
Office: Online Chat Laulima Thursday 7-8 pm
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808-236-9120
EFFECTIVE DATE: Spring 2015

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 63194) and optional.

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 assignments (online)
• Discussion Board (online)
• Research Paper (online)
• Two Midterm Exams (TTC)
• Final Exam (TTC)

### GRADING

Grades will be based on the following:
- Quizzes (11 best out of 13)---------------------- 110 points
- Assignments (12 best out of 15)------------------ 60 points
- Research Paper (1)----------------------------- 70 points
- Discussion Posts (2)----------------------------- 20 points
- Midterm Exams (2)------------------------------- 220 points
- Final Exam-------------------------------------- 120 points
- Total ------------------------------------------ 600 points

**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:
- **A** 600-540 points
- **B** 539-480 points
- **C** 479-420 points
- **D** 419-360
- **F** below 360

**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) is on Mar 31, 2015.

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) by Mar 31, 2015.
LEARNING RESOURCES

1. Instructor Lecture Notes (spiral bound, Spring 2015 edition)-REQUIRED. Available at the WCC Bookstore, about $8. Order and check shipping policies at http://www.bookstore.hawaii.edu/wcc
2. Optional text: Chemistry in Changing Times by Hill and Kolb, 2010, 12th edition- (buy used copy online)
3. Calculator (required) & Periodic Chart
4. Course website: https://laulima.hawaii.edu
5. Multimedia (videos, animations, etc.) in Modules (Laulima Modules)
6. Practice quizzes & exams in Assignments, Tests & Surveys (Laulima ATS)
7. Supplemental instruction in Blackboard Collaborate (schedule to be announced later) The link is: http://tinyurl.com/WCC-Elluminate-Room-1
8. Laulima Chat Room Instructor online hours every Thursday at 7-8 PM. You may post questions there anytime. Also, Discussion Board.
10. OLA (Online Learning Academy) open everyday except Saturday. 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 assignment (5 points) due every Sunday at 9 pm. It is very hard to catch up when you fall behind.

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 for this course that you will routinely follow in real time, example: MWFS 7-9 pm. It is mandatory to post at least a 30-word question, response or comment on each of the Discussion Board (due before each long exam). This counts as 2 points @ towards your Discussion posts.

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 has not yet arrived, please download, and print the Notes found in Laulima Modules.

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 assessment.** You are expected to do the homework at the end of each chapter. Upload this in Laulima Assignments by the due date.

7. **Ask** questions in the Discussion or Chat if you cannot solve a problem or answer a question. In your question, please cite the chapter number and page number. Give context to your question so that you will get the appropriate answer. I will monitor the chat and discussion postings and provide answers as needed. However, I strongly encourage fellow students to answer the questions. In articulating the answer you yourself get a deeper understanding of the concepts. You will receive extra credit.

8. You are expected to take the practice quiz at least twice before the actual quiz. It is important that you feel a certain level of confidence before taking the actual tests.

9. If you have any problems, please do not hesitate to see 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 LMK if this is your first time.

10. You are required to attend at least 5 supplemental instruction (SI) sessions/chat sessions during the semester. You will be deducted points for not meeting the minimum. You will get extra credit points for going beyond the minimum. The online supplemental instruction is available at [http://tinyurl.com/WCC-Elluminate-Room-1](http://tinyurl.com/WCC-Elluminate-Room-1). **Face-to-face supplemental instruction** is also available on Tue and Thurs in Imiloa 112. You may also use the OLA online tutoring, [http://manoa.hawaii.edu/ola/](http://manoa.hawaii.edu/ola/). Students should use tutoring from the very beginning of the semester before running into difficulty.

11. 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:
- three hours reading Notes and text, and doing learning checks, equivalent to attending classes face-to-face
- two hours viewing online video lectures and websites, and doing self-assessment
- one hour doing homework assignment
- one hour attending SI session/chat room/OLA tutoring
- one hour taking practice quiz, preparing your cheat sheet and taking the actual quiz

12. Back up all your submissions.
POLICIES

1. **Online weekly quizzes.** A weekly quiz is accessed through Laulima Assignment, Tests and Surveys. Each chapter quiz consists of ten multiple-choice questions. The quiz will be available every week from **Thursday 9 pm to Sunday at 9 pm.** 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, which quiz, what kind of computer, which web browser, and what kind of internet connection was used. Please notify me by email **immediately before the deadline has passed.** Upon verification by Laulima, your quiz will be reset 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 will NOT be 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 final grade, the **lowest two quiz scores will be dropped.**

The **quiz will be timed** (10-20 min depending on the questions). Always have a calculator and a periodic chart when taking a 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.

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.
3. **Assignments.** There are a total of 15 assignments and 2 discussion posts (see list below). Each homework assignment is at the end of each chapter in *Notes* as well as in *Laulima Modules*. The 3 lowest assignment scores will be dropped.

**How to turn in assignment.** The assignment should be saved in any of the file formats: .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 I can open it and grade it.** Label the file with your family name and assignment number and upload in Laulima “Assignments” as attachment.

Extra credit essays are available and must be submitted in the same way as assignments.

Each assignment (worth 5 points each) will be graded. Each of this is due on **Sunday 9 pm** of the week it is due (see course schedule).

4. **The scavenger hunt assignment (Assign #1) 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 all the time. Two discussion postings 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 **April 5, 2015** (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
Instructor will give feedback if paper was submitted one week before due date (May 3, 2015). Paper may be revised and resubmitted on the deadline (May 10, 2015). 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. **Discussion Extra Credit.** Questions about the topic content should be posted on the "Discussion." If you give a correct response to your classmates’ question in the Discussion you will be awarded 0.5 to 1 extra credit points. Interactions promote deeper learning hence I encourage you all to participate in this forum. If you post your questions, others will be able to benefit from the answers. Please remember when online to follow netiquette rules. Avoid flaming. See http://www.albion.com/netiquette/corerules.html

8. **Other Extra Credit.** You can earn extra credit up to a maximum of 20 points.
   - Correct response to classmates’ question in the Chat Room/Discussion is 0.5 to 1 point each.
   - Extra credit essays (uploaded in Laulima Assignments).
   - Attendance in the Blackboard Collaborate supplemental instruction sessions beyond the required 5 sessions will earn 0.5 point per session.
   - Scoring 80% in the practice midterm and practice final will earn 2 points each. Each of these can be taken unlimited times.
   - 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.

9. **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.

10. When in doubt, please ASK. It’s cool to ask questions.

**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 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 encouraged 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 or you may stop by Hale 'Akoakoa 213 for more information.

**COURSE CONTENT AND SCHEDULE**

Important Dates: 01/16/15 Last day to receive 100% tuition refund
02/02/15 Last day to receive 50% tuition refund
03/31/15 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* 9 PM*</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Orientation &amp; Chemistry</td>
<td>Chap 1 &amp; 2 Notes Multimedia in Modules</td>
<td>Jan 18 Assign#1 Scavenger Hunt &amp; Syllabus Quiz</td>
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<td>2</td>
<td>Atomic Structure</td>
<td>Chap 3 Notes Multimedia in Modules</td>
<td>Jan 25 Quiz #1Chaps 1 &amp; 2 Assign#2</td>
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<td>3</td>
<td>Chemical Bonds</td>
<td>Chap 4 Notes Multimedia in Modules</td>
<td>Feb 1 Quiz #2-Chap 3 Assign#3</td>
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<td>4</td>
<td>Chemical Accounting I</td>
<td>Chap 5a Notes Multimedia in Modules</td>
<td>Feb 8 Quiz #3-Chap 4 Assign#4</td>
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<td>5</td>
<td>Chemical Accounting II</td>
<td>Chap 5b Notes Multimedia in Modules</td>
<td>Feb 15 Quiz #4-Chap 5a Assign#5</td>
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<td>6</td>
<td>Gases, Liquids, Solids</td>
<td>Review Chaps 1 – 5 for Midterm Exam</td>
<td>Feb 22 Quiz #5-Chap 5b Assign#6</td>
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<td>Week</td>
<td>Topic</td>
<td>Notes</td>
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<td>7</td>
<td>Acids &amp; Bases</td>
<td>Chap 6 Notes Multimedia in Modules</td>
<td>Feb 25-27 Midterm 1</td>
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<td>Chaps 1-5</td>
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<td>Mar 1 Post Discussion #1</td>
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<td>The Testing Center</td>
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<td>8</td>
<td>Oxidation &amp; Reduction</td>
<td>Chap 7 Notes Multimedia in Modules</td>
<td>Mar 8 Quiz #6-Chap 6 Assign#7</td>
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<td>Organic Chemistry &amp; Polymers</td>
<td>Chap 8 Notes Multimedia in Modules</td>
<td>Mar 15 Quiz #7-Chap 7 Assign#8</td>
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<td>Nuclear Chemistry</td>
<td>Chap 9 &amp; 10 Notes Multimedia in Modules</td>
<td>Mar 22 Quiz #8-Chap 8 Assign#9 Paper Topic</td>
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<td>11</td>
<td>Air</td>
<td>Chap 11 Notes Multimedia in Modules</td>
<td>Apr 5 Quiz #9 Chaps 9 &amp; 10 Assign#10 Assign #11 Research Paper Topic</td>
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<td>Water</td>
<td>Review Chaps 6- 11 Midterm Exam</td>
<td>Apr 12 Quiz #10-Chap 11 Assign #12</td>
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<td>Household Chemicals</td>
<td>Chap 13 &amp; 14 Notes Multimedia in Modules</td>
<td>Apr 15-17 Midterm 2</td>
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<td>Chaps 6-11</td>
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<td>Apr 19 Post Discussion #2 Testing Center</td>
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<td>14</td>
<td>Research</td>
<td>Chap 21Notes Multimedia in Modules</td>
<td>Apr 26 Quiz#11-Chap 13 Air Quiz#12-Chap14 H₂O Assign #13 &amp; Assign#14</td>
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<td>15</td>
<td>Paper</td>
<td>Write research paper</td>
<td>May 3 Quiz 13-Chap 21</td>
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<td>Assign #15 Draft Research Paper</td>
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<td>16</td>
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<td>Review for Final Exam</td>
<td>May 10 Final Research Paper Turnitin.com due</td>
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<tr>
<td>17</td>
<td>Cumulative Final Exam</td>
<td>The Testing Center</td>
<td>May 11-13 (paper-based) Final Exam Testing Center</td>
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This syllabus is subject to change. Please bring any error to the attention of the instructor.