Chem 100 Chemistry in Society
3 credits (CRN 60048)
TR 11:30-12:45 pm Imiloa 111

INSTRUCTOR: Dr. Leticia ‘Letty’ Colmenares
OFFICE: Imiloa 116
OFFICE HOURS: MW 11:15am-12 pm, TR 9:45-10:30 am; 12:45-1:30pm or by appointment
TELEPHONE: 236-9120
EMAIL: Leticia@hawaii.edu
EFFECTIVE DATE: Spring Term 2019

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 the Ko‘olau region of O‘ahu 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 not available this semester.

STUDENT LEARNING OUTCOMES

As a result of taking this course, students can expect to attain the following 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/presenting a short research paper or PowerPoint.
COURSE TASKS

- **Attendance/Participation & Quizzes.** Attendance and participation are required. In order to participate in class activities, you need to read the assigned class materials before coming to class. Quizzes will be announced ahead of time.

- **Online chapter homework.** There is a total of 12 chapter assignments in Laulima. **Each assignment is worth 10 points (120 points total).** You have 3 attempts (unlimited time) but must be completed before the due date. Turn in your online homework on or before the deadline. Late submissions will be deducted 1 point per day late. After 1 week, late homework will not be accepted.

- **Online practice exams.** The practice exam is to help you review and prepare for the in-class long exams. This is available in Laulima for one week before each long exam. If you don’t take the practice quiz by the closing date, your score will be zero.

- **Four (4) midterm exams (in class),** each covering approximately 25% of the course. Each is closed notes, closed book.

- The **final exam will cover all topics** (cumulative).

- **Research** Project (Paper/PowerPoint presentation).

ASSESSMENT TASKS AND GRADING

Grades will be based on the following:

- Syllabus Quiz----------------------------- 10 points (Assignments & Tests)
- Attendance & Quizzes--------------------- 60 points (In-class)
- Online Assignments --------------------- 120 points (Assignments & Tests)
- Online practice exams (4)---------------- 40 points (Assignments & Tests)
- Research paper topic/references---------- 10 points (Turnitin.com)
- Research paper/presentation-------------- 50 points (Turnitin.com)
- Long Exams (60 x 4)---------------------- 240 points (In-class)
- Final Exam------------------------------- 120 points (In-class)
- **Total** --------------------------------- 650 points

Course grades will be based on your total points, assigned as follows:

- 585-650 total points (90-100% of cumulative total) = A
- 520-584 total points (80-89% of cumulative total) = B
- 455-519 total points (70-79% of cumulative total) = C
- 390-454 total points (60-70% of cumulative total) = D
- below 390 total points (60% of cumulative total) = F

Curving might be employed if deemed necessary.

If you drop out from the course without any notice, you will be assigned with an ‘F’ grade. To avoid this, you need to withdraw **officially (through MyUH) by March 25, 2019.**
The other grades I, W, CR, NC and N are described at https://windward.hawaii.edu/academic_affairs/Grades.php. These options must be discussed with the professor. **Students requesting for N grade must provide a formal letter of request before the final examination with supporting evidences.**

The deadline to change from A-F to CR/NC/audit option (with Office of Admissions & Records) is on **March 25, 2019.**

**LEARNING RESOURCES**

1. Required: Chem 100 Lecture Notes and PowerPoints
2. Optional: *Chemistry in Changing Times* by Hill and Kolb, 12<sup>th</sup> or later edition (buy cheapest available online).
3. Required: Calculator (cell-phone calculator not allowed in exams)
4. Course website: [https://laulima.hawaii.edu](https://laulima.hawaii.edu) (multimedia will be made available here)
5. *Supplemental Instruction*
6. Tutor.com (Online tutoring) available 24/7, [https://windward.hawaii.edu/tutor.com/](https://windward.hawaii.edu/tutor.com/)
7. TRIO Student Support Services, [https://windward.hawaii.edu/trio/student_support_services.php](https://windward.hawaii.edu/trio/student_support_services.php)
9. Office consultation Hours. After every lecture class.
10. Internet access. Class announcements will be made through the UH email system, so be sure to check your “hawaii.edu” account regularly.

**ACTIVITIES REQUIRED OUTSIDE CLASS TIMES**

On average, you should spend about **6 hours per week outside** the classroom to study for this course.

- At least **2-3 hours per week** reading the *Lecture Notes* and multimedia. Reading before class will help you to listen more actively in class and give an advanced indication of any difficulties that you can then clarify in the lecture.
- At least **1-2 hours per week** doing learning checks, self-assessment, and worksheets.
- At least **1 hour per week** completing online assignment.
- Attend at least **5 supplemental instruction (SI) sessions** or **tutoring** during the semester.

**ADDITIONAL INFORMATION**

**ATTENDANCE POLICY.** Attendance will be taken at the start of every class meeting. Perfect attendance and participation will receive extra credit. If you arrived late or will leave early, you will receive fractional equivalents. You will be referred to MySuccess after 2 unexcused absences.

**CLASSROOM POLICY.** Respect for everyone in the classroom is required of both students and the instructor.

- Cell phone use is strictly prohibited because it is disruptive of learning. Turn off all cell
phones prior to the start of class.
- Laptop computers or any other device may be allowed after consultation with the professor.
- Don’t cause or tolerate distractions. Tactfully ask those making noise to be quiet.
- Bring the lecture notes and scientific calculator at all times.
- Ask questions if you don’t understand.

**EXTRA CREDIT POLICY.** *You can earn* extra credit up to a maximum of 20 points. For example, perfect class attendance is 5 points. Attendance in SI sessions (1.0 point @ for first five 1-hr session; 0.5 points @ beyond 5th session). Extra credit topics (examples: Redi’s hypothesis, DHMO, Airbags, Antacids, etc) in the Lecture Notes is 2 points each.

**MISSED EXAM.** Only one missed mid-term exam can be made up, if you notify the instructor in advance or on the day of the exam with documentation, such as, signed doctor’s note, police report or obituary notice. There will be no make-up for the final exam.

**RESEARCH PROJECT.** The research paper is a three-page (double space) paper of at least 750 words to make a connection between a chemistry concept covered in the course and an application in everyday life. This will be made based on textbook readings and online resources. A sample research paper and a handout “tips on how to search for references” are downloadable in Laulima Modules. You must read the provided sample to avoid making a mistake of writing an essay instead of a research paper. Alternatively, you may do a PowerPoint presentation (at least 12 slides).

Research paper topic (2-3 sentences) with 5 reliable references need to be pre-approved by March 26, 2019 in http://turnitin.com. Topics like the Kreb’s cycle, Glycolysis, or Probiotics, etc, (textbook topics in nutrition, biology, zoology and other courses), sample paper topics and airbags and antacids (already included in extra credit) 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: 20008620 and Password: Colmenares

Instructor will give feedback if paper was submitted one week before due date (Apr 25, 2019). Paper may be revised and resubmitted on or before the deadline (May 2, 2019).

The research paper grade will be based on the following rubrics:
- contains a title and purpose (thesis statement) (5 points)
- discusses at least one issue and effectively connects to concepts learned in class (10 points)
- information is well-organized and coherent (10 points)
- has in-depth discussion and has correct length (at least 750 words) (10 points)
- no errors in spelling, grammar and use of English (5 points)
- cites all data/information obtained from other sources (5 points)
- lists at least 5 reliable sources, with at least 2 peer-reviewed articles (5 points)
12. It is mandatory to attend at least 5 supplemental instruction (SI) sessions or tutoring during the semester. You will receive 1 extra credit point per 1-hour session. The SI Leader will email you the schedule. If you are not available during these hours, please go to TRIO or use the Tutor.com online tutoring. Students should use tutoring from the very beginning of the semester before running into difficulty. The SI session is a good place to get tips on how to solve your homework and review for quizzes and exams.

**DISABILITIES ACCOMMODATIONS**

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 to discuss reasonable accommodations that will help you succeed in this class. Ann Lemke can be reached at 235-7448, lemke@hawaii.edu, or you may stop by Hale ‘Ākoakoa 213 for more information.

**TITLE IX**

Title IX prohibits discrimination on the basis of sex in education programs and activities that receive federal financial assistance. Specifically, Title IX prohibits sex discrimination; sexual harassment and gender-based harassment, including harassment based on actual or perceived sex, gender, sexual orientation, gender identity, or gender expression; sexual assault; sexual exploitation; domestic violence; dating violence; and stalking. For more information regarding your rights under Title IX, please visit: https://windward.hawaii.edu/Title_IX/.

Windward Community College is committed to the pursuit of equal education. If you or someone you know has experienced sex discrimination or gender-based violence, WCC has resources to support you. To speak with someone confidentially, contact the Mental Health & Wellness Office at 808-235-7393 or Kaahu Alo, Designated Confidential Advocate for Students, at 808-235-7354 or kaahualo@hawaii.edu. To make a formal report, contact the Title IX Coordinator, Karla K. Silva-Park, at 808-235-7468 or karlas@hawaii.edu.

**ACADEMIC INTEGRITY**

Work submitted by a student must be the student’s own work. Trying to present another person’s work as your own is cheating. Cheating on any exam/quiz/homework and other acts of misconduct such as soliciting or leaking what’s on the exam are academically dishonest and will be dealt with severely. You can only discuss questions from the midterm exams after the graded exams are returned to you. Students who commit academic dishonesty or cheating will receive a failing grade on the assignment or exam. Students will receive a failing grade in the course after a second offense. All cases of academic dishonesty are referred to the Vice Chancellor for Student Affairs.

**ALTERNATE CONTACT INFORMATION**

If you are unable to contact the instructor, have questions that your instructor cannot answer, or for any other issues, please contact the Academic Affairs Office:
Location: Alakai 121, Phone: 808-235-7422, Email: wccaa@hawaii.edu

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<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Chapter</th>
<th>Learning Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/8</td>
<td>Orientation &amp; Chemistry</td>
<td>Module 1</td>
<td>Scientific method, DQ, matter, classes, properties and changes, atomic model</td>
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<tr>
<td>1/10</td>
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<td>1/17</td>
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<td>1/22</td>
<td>Chemical Bonds</td>
<td>Module 3</td>
<td>Name chemical compounds. Write chemical formulas. Ionic &amp; covalent compounds. Polar and Nonpolar molecules.</td>
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<td>1/24</td>
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<tr>
<td>1/29</td>
<td></td>
<td>Review</td>
<td>Finish Up Chap 3, Review, Exam 1, Start Chap 5</td>
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<tr>
<td>1/31</td>
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<td>Exam 1</td>
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<tr>
<td>2/5</td>
<td>Chemical Accounting I</td>
<td>Module 4</td>
<td>Balance chemical equations. Solve using unit factor method. Solve for molar mass, moles, grams.</td>
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<td>2/7</td>
<td>(calculator)</td>
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<tr>
<td>2/12</td>
<td>Chemical Accounting II</td>
<td>Module 5</td>
<td>Solve problems involving mole ratios. Solution concentration. Like dissolves like. Describe the relationship between properties and structure of matter. IMF</td>
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<tr>
<td>2/14</td>
<td>(calculator)</td>
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<td>2/21</td>
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<td>Exam 2</td>
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<td>2/28</td>
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<tr>
<td>3/5</td>
<td>Acids &amp; Bases</td>
<td>Module 7</td>
<td>Identify acid-base reactions and their applications in everyday lives.</td>
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<td>3/7</td>
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<tr>
<td>3/12</td>
<td>Oxidation &amp; Reduction</td>
<td>Module 8</td>
<td>Identify redox reactions and their applications in everyday lives.</td>
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<td>3/14</td>
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<tr>
<td>3/19</td>
<td>How to find reliable references</td>
<td>Spring Break</td>
<td>Relax, find a research paper topic, review for Exam 3</td>
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<td>3/21</td>
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<td>3/26</td>
<td>Holiday</td>
<td>Exam 3</td>
<td>Paper Topic &amp; 5 References due <a href="http://turnitin.com">http://turnitin.com</a></td>
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<td>3/28</td>
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<td>4/4</td>
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<td>4/9</td>
<td>Nuclear Chemistry</td>
<td>Module 10</td>
<td>Balance nuclear equations. Identify nuclear reactions and their applications in everyday lives.</td>
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<td>4/11</td>
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<td>4/16</td>
<td>Air and Water</td>
<td>Module 11</td>
<td>Explain the composition of air. Oxygen cycle, Acid rain, Ozone. Explain the composition of water. Hard water. BOD. Water treatment</td>
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<td>4/25</td>
<td>Module 12</td>
<td>Draft Paper due</td>
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<td>4/30</td>
<td>Final Exam Review</td>
<td>Final Paper due</td>
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<td>5/9 Thu</td>
<td>Cumulative Final Exam</td>
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