CHEMISTRY 151, Elementary Survey of Chemistry
3 Credits (CRN 64010)
TR 8:30 – 9:45 A.M.

INSTRUCTOR: David Shinsato

OFFICE: Hale ‘Imiloa 118
OFFICE HOURS: TR 8:00 – 8:30 A.M.

TELEPHONE: 236-9117 EMAIL: davidts@hawaii.edu
EFFECTIVE DATE: Fall 2018

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

Provides the student with an adequate background in the fundamentals of chemistry. Covers the basic language and quantitative relationships of chemistry, including atomic structure, chemical bonding, structure-property relationships, chemical reactions. Prerequisite to CHEM 152 for majors in medical technology and nursing and other allied health and science-related fields, or can be taken as a preparatory course for CHEM 161. (3 hours lecture)

Pre-Requisite(s): Credit in MATH 24, 25, 26, 28, 29, 75X or higher. Placement in ENG 23 or higher.

STUDENT LEARNING OUTCOMES

As a result of taking this course, students can expect to attain the following outcomes:

- Predict properties of chemical elements based on their atomic structure and their location in the Periodic Table.
- Name chemical compounds, balance chemical and nuclear reactions.
- Predict properties of chemical compounds based on chemical bonding, molecular shapes, and polarity.
• Calculate mass relationships in chemical reactions and the quantity of matter in gaseous chemicals and chemical solutions.
• Predict the products of common chemical reactions.
• Apply knowledge of chemical concepts to a current environmental, health, industrial, or technological issue or condition by writing a short research paper.

COURSE TASKS

quizzes, homework, midterm exams, final exam, attendance, and research paper

ASSESSMENT TASKS AND GRADING

1. Quizzes
   Short quizzes will be given throughout the semester that will be based on topics from the previous or current meetings. Frequency of quizzes will be determined based on the class progress during the semester. The average score of all quizzes will determine your final quiz score.

2. Homework
   Homework will be assigned for each chapter to be turned in on the designated date announced by the instructor. Late homework will be penalized 50% of the total points for that assignment for each class day late.

3. Midterm and Final Exams
   Each exam will cover three chapters except for the first exam which will include only two chapters. The final exam will cover topics discussed after the last midterm exam and special topics. Each exam will be mainly multiple choice items which may involve calculations. The whole class time for each meeting will be used for each exam.

4. Research Paper
   This activity will evaluate a student’s ability to apply or relate chemical concepts, theories, or principles discussed in class, to current issues on environmental, health, and technological problems/conditions/issues or to real life applications. Details of the research paper requirements will be posted to Laulima.

5. Attendance and In-class Participation
   Class attendance and participation are required components of this course. Please see the Attendance and Make-Up policies below.

6. Extra Credit
   Extra credit opportunities will be offered during the semester. This may be in the form of class participation, ‘bonus questions’ on the quizzes or exams, etc.

7. Evaluation/Grade Assignment
   Grades will be computed based on the activities listed above: quizzes, homework, exams, attendance, research paper, and extra credit (if applicable). See below for the percentage breakdown for each category.

Windward Community College is an equal opportunity, affirmative action institution.
Percentage of Total Grade:
- 10% Quizzes
- 10% Homework
- 38% Midterm Exams (~12.7% per exam)
- 17% Final Exam
- 15% Research Paper
- 10% Attendance/Participation

Course grades will be assigned as follows:
- A ≥ 90%
- B ≥ 80%, but less than 90%
- C ≥ 70%, but less than 80%
- D ≥ 60%, but less than 70%
- F less than 60%

Note: curving of grades may be employed if deemed necessary by the instructor.

LEARNING RESOURCES

Required Materials:
- 1) Lecture notes for CHEM 151 by L. Colmenares
  Available at the college bookstore.
- 2) Scientific Calculator
  Each student will be required to bring their own scientific calculator to each meeting. Sharing of supplies during quizzes and exams is not allowed, and phones are not acceptable 'calculators'.
- 3) Internet Access
  Resources will be made available through Laulima (http://laulima.hawaii.edu)
  Also, class announcements will be made through the UH email system, so be sure to check your ‘hawaii.edu’ account regularly.

ADDITIONAL INFORMATION AND POLICIES

- Due to the nature of this course, as we progress through the semester, students will be expected to recall concepts from sections covered in previous classes.
- There is much to be covered in this course, so you are strongly encouraged to keep up with the class schedule, assignments, etc.
- If you need further clarification on a certain topic, or have questions, please do not hesitate to ask the instructor in person or through email.

- Make-Up Policy
  - As a general rule, there will be NO MAKE-UP exams or quizzes. Also, students are not allowed to re-take anything for a better grade.
  - If you have a scheduling conflict with any of the exams, signed documentation (from your advisor, doctor, commander, coach, etc.) will be needed to take an early exam, and will be considered on a case-by-case basis.
  - Employment is not a reason to miss an exam.
• **Attendance Policy**
  - Attendance will be taken at every class meeting. Students who leave before the designated end time will not receive points for that day unless they have received prior approval from the instructor.
  - “Signing in” for other students is not allowed, and all students involved can expect to have points deducted for that day.

• **Classroom Etiquette**
  - “Movie Theater Etiquette” (no A/V recording, no cell phones, no texting, etc.)
  - Avoid unnecessary conversations with classmates, especially during lecture time. Respect the right of others to have an environment conducive to learning.
  - Boisterous laughter, personal small talks and unnecessary jokes, offensive or discourteous remarks are distractions that will not be tolerated. Other disruptive behavior includes: making and receiving phone calls, reading newspaper, magazines, books, or other materials not related to the course.
  - Disruptive student(s) will be warned ONCE, and if the disruption continues, the student(s) will be asked to leave and will not receive points associated with that day.

• **Other Class Policies**
  - Announcements: Students are responsible for any class announcements whether or not they are present in class when the announcement is made. Check your ‘hawaii.edu’ email and Laulima regularly for announcements.
  - If you have any questions or issues to discuss with me, please come to my office hours or contact me through email.

**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, Windward CC has resources to support you. To speak with someone confidentially, contact Karla Silva-Park, Mental Health Counselor, at 808-235-7468 or karlas@hawaii.edu 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 at 808-235-7393 or wcctix@hawaii.edu.

ACADEMIC INTEGRITY

Work submitted by a student must be the student’s own work. The work of others should be explicitly marked, such as through use of quotes or summarizing with reference to the original author.

Students can upload papers to http://www.TurnItIn.com to have papers checked for authenticity, highlighting where the paper potentially fails to appropriately reference sources.

In this class, students who commit academic dishonesty, cheating or plagiarism will have the following consequence(s):

Students will receive a failing grade for plagiarized assignments.

All cases of academic dishonesty are referred to the Vice Chancellor for Student Affairs.

ALTERNATIVE 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
## COURSE SCHEDULE

<table>
<thead>
<tr>
<th>Week #</th>
<th>Date</th>
<th>Day</th>
<th>Lecture Topic</th>
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<tbody>
<tr>
<td>1</td>
<td>8/21</td>
<td>T</td>
<td>Syllabus / Chapter 1: Basic Concepts of Matter</td>
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<td></td>
<td>8/23</td>
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<td>Chapter 1</td>
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<td>2</td>
<td>8/28</td>
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<td>Chapter 1</td>
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<td>8/30</td>
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<td>Chapter 2: Measurements in Chemistry</td>
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<td>3</td>
<td>9/4</td>
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<tr>
<td>4</td>
<td>9/11</td>
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<td>Chapter 2</td>
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<td>9/13</td>
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<td><strong>EXAM 1 (Chapter 1, 2)</strong></td>
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<td>5</td>
<td>9/18</td>
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<td>Chapter 3: Atomic Structure and the Periodic Table</td>
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<td>Chapter 4: Ionic Bond Model</td>
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<td>7</td>
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<td>Chapter 5: Coordinate Bond Model</td>
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<td><strong>EXAM 2 (Chapter 3, 4, 5)</strong></td>
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<td>9</td>
<td>10/16</td>
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<td>Chapter 6: Chemical Calculations</td>
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<td></td>
<td>10/25</td>
<td>R</td>
<td>Chapter 7: Gases, Liquids, and Solids</td>
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<td>11</td>
<td>10/30</td>
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<td>Chapter 7</td>
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<td>11/1</td>
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<td>Chapter 8: Solutions</td>
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<td><strong>EXAM 3 (Chapters 6, 7, 8)</strong></td>
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<td>Chapter 9: Chemical Reactions</td>
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<td>14</td>
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<td>11/22</td>
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<td><strong>Thanksgiving Day (No Class)</strong></td>
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<td>Chapter 9</td>
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<td>11/29</td>
<td>R</td>
<td>Chapter 10: Acids and Bases</td>
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<td>16</td>
<td>12/4</td>
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<td>Chapter 10</td>
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<td>12/6</td>
<td>R</td>
<td>Chapter 11: Nuclear Chemistry</td>
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<td>17</td>
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<td><strong>FINAL EXAM 8:30 - 10:30 A.M.</strong></td>
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<td>(Chapters 9, 10, 11, and ‘Additional Topics’)</td>
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* Schedule subject to change.

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