CHEM161, General Chemistry I
3 Credits, CRN: 61040
Spring 2022  Tuesday/Thursday 11:30-12:45

INSTRUCTOR: Marc R. Bresler
OFFICE: Zoom link: https://hawaii.zoom.us/j/98992574555
OFFICE HOURS: M/R 9:00-10:00 T/W 1:00-2:00
EMAIL: mbresler@hawaii.edu
EFFECTIVE DATE: Spring 2022

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.

SYLLABUS CHANGE POLICY:
Information contained in the course syllabus may be subject to change with reasonable advance notice, as deemed appropriate by the instructor. Updates to the syllabus will be communicated via email.

CLASS INFORMATION
11:30 – 12:45, Tuesday/Thursday

Meeting Location: Zoom meeting info will be provided at the beginning of the semester

About This Course
Basic principles of inorganic chemistry with an emphasis on problem solving. First course of a two-course sequence designed to meet the one-year General Chemistry requirement for pre-med, science and engineering majors. Topics include chemical calculations, electronic structure, chemical bonding, states of matter and solutions. (2.5 hours lecture)

Pre-Requisite(s): A grade of “C” or better in Math 103 or higher, or placement into Math 135 or consent of instructor. Co-Requisite(s): Registration in CHEM 161L. Recommended Preparation: Student should have taken high school chemistry, CHEM 100, or CHEM 151.

STUDENT LEARNING OUTCOMES
As a result of taking this course, students can expect to attain the following outcomes:
• Use the mole concept in solving stoichiometry problems involving solids, liquids, gases and solutions.
• Balance chemical equations, classify reactions, identify and analyze the role of the chemicals involved in chemical reactions.
• Predict the behavior of gases while undergoing changes in volume, pressure, temperature and quantity.
• Manipulate thermochemical equations and calculate the amount of energy involved in chemical reactions.
• Predict physical and chemical properties of elements based on electronic structure and location in the Periodic Table.
• Predict physical and chemical properties of compounds based on chemical bonding, geometry and intermolecular interactions.

Course Format
The course will be delivered online in a synchronous manner via the Zoom platform, at the scheduled time of 11:30 to 12:45 on Tuesdays and Thursdays – some of the sessions will consist of tutorials and will be optional (but highly recommended). Attendance will be taken and students are expected to participate in the work/activities presented during the required 75-minute sessions. Students should allocate 4-6 hours a week to complete additional reading and homework tasks. Assignments are generally due one week after completion of a chapter. Announcements will be posted every weekend and an attempt will be made to provide grade updates within 2 weeks of work submission.

Required Materials
Students must have the following:
• Computer or tablet with high-speed internet connection
• Access to Zoom
• Access to Laulima website
• Google doc access or Microsoft Word and pdf reading software (Adobe)
• Scientific calculator that has Log and ln functions.

ASSESSMENT TASKS AND GRADING Attendance & Grading
Attendance/Participation
Attendance to synchronous sessions is mandatory. Participation questions will be asked throughout the lecture and missing those sessions will impact your grade. If you anticipate being absent or were unable to attend a session, contact your instructor to determine if you can be “excused” due to extenuating circumstances. Such circumstances include illness accompanied by a doctor’s note, attending to family matter accompanied with written statement to that effect, or dealing with the passing of a family member accompanied with a link to the obituary.
**Evaluation and Feedback**
The instructor will attempt to grade work and provide feedback within two weeks.

**Late Work**
A 10% per day penalty will be applied to all late work, up to 30%. No work will be accepted later than one week after the due date unless there are specific circumstances and you have notified the instructor prior to the initial due date. Work can be submitted until 11:59 pm on the due date without late penalty.

**Exams**
There will be 4 exams and one final cumulative exam. Details on how exams will be administered will be provided at a later time but they will all be online. Mid-term exams will be completed over a set period of 75 minutes and the final will be over 2 hours. Although the final will not be cumulative, concepts learned earlier during the semester will be used in later chapters and will be part of that exam. Exams will consist of a combination of multiple choice, numerical answers, matching, true/false, and short-answer questions.

**Recipe for Success**
- Check the Laulima homepage every Monday morning for announcements and important information.
- Check your email regularly (at least twice a week) as this will be our main communication tool
- Do not procrastinate, although it will appear that we start slow, the speed/amount of material will quickly increase and next thing you know, you’re lost!
- Do your work on a regular basis, it is proven that frequent small chunks of time are more effective than cramming everything the day it’s due - cramming generally will not produce a good outcome.

**Grade Composition**
The Final Grade will be based upon a possible total of 700 points. The lowest assignment and quiz will be dropped.

- Chem101 chapter Assignments (best 8 out of 9 x 25 = 200 points)
- In-class participation/quizzes (80 points)
- Special Project (20 points)
- 4 mid-terms (50 points each = 200 points)
- Final exam (200 points)

Extra credit: you may earn up to 20 extra points doing extra credit work which will be made available throughout the semester. Students can check their grades and examination scores on Laulima Gradebook at any time.

**Final Grade**
Grades of I, W, CR, CN are described in the current college catalog. The last day for withdrawals (W, CR, CN) is Nov 2nd, 2021, after that date, the instructor will sign withdrawals only in cases of extreme or unusual circumstances, such as 1) a certified medical reason, or 2) a death in the immediate family. Grade-related excuses are unacceptable. Students who no longer attend class and who DO NOT OFFICIALLY WITHDRAW from the course will receive “F” grades.
Students must present the "Request for Incomplete" form to their instructor prior to the last day of instruction. "I" grades will be given only to students who are achieving passing grades and are very close to completing the course. Only serious reasons will be accepted (listed under the withdrawal policy).

You will receive a letter grade based on the following scale:

**Letter Grades and Percentage Ranges**

A = 90-100%, B = 80-89%, C = 70-79%, D = 60-69%, F = 0-59%

**Tentative Course Schedule**

The following schedule is subject to change. Should changes occur, you will be notified by email. Please note the highlighted entries for the mid-term and final exams.

<table>
<thead>
<tr>
<th>Week</th>
<th>Day</th>
<th>Date</th>
<th>Chapter/Event</th>
<th>Topic/Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tuesday</td>
<td>11-Jan</td>
<td>Intro</td>
<td>Syllabus/Math Review</td>
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<td></td>
<td>Thursday</td>
<td>13-Jan</td>
<td>1</td>
<td>Essential Ideas in Chemistry</td>
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<tr>
<td>2</td>
<td>Tuesday</td>
<td>18-Jan</td>
<td>1</td>
<td>Essential Ideas in Chemistry - tutorial</td>
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<td></td>
<td>Thursday</td>
<td>20-Jan</td>
<td>2</td>
<td>Atoms, Molecules and Ions</td>
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<tr>
<td>3</td>
<td>Tuesday</td>
<td>25-Jan</td>
<td>2</td>
<td>Atoms, Molecules and Ions</td>
</tr>
<tr>
<td></td>
<td>Thursday</td>
<td>27-Jan</td>
<td>2</td>
<td>Atoms, Molecules and Ions - tutorial</td>
</tr>
<tr>
<td>4</td>
<td>Tuesday</td>
<td>1-Feb</td>
<td>3</td>
<td>Composition of Substances and Solutions</td>
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<tr>
<td></td>
<td>Thursday</td>
<td>3-Feb</td>
<td>3</td>
<td>Composition of Substances and Solutions - tutorial</td>
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<tr>
<td>5</td>
<td>Tuesday</td>
<td>8-Feb</td>
<td>Exam 1</td>
<td>Good luck!</td>
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<tr>
<td></td>
<td>Thursday</td>
<td>10-Feb</td>
<td>4</td>
<td>Stoichiometry of Chemical Reactions</td>
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<tr>
<td>6</td>
<td>Tuesday</td>
<td>15-Feb</td>
<td>4</td>
<td>Stoichiometry of Chemical Reactions</td>
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<tr>
<td></td>
<td>Thursday</td>
<td>17-Feb</td>
<td>4</td>
<td>Stoichiometry of Chemical Reactions</td>
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<tr>
<td>7</td>
<td>Tuesday</td>
<td>22-Feb</td>
<td>4</td>
<td>Stoichiometry of Chemical Reactions - tutorial</td>
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<td></td>
<td>Thursday</td>
<td>24-Feb</td>
<td>Exam 2</td>
<td>Good luck!</td>
</tr>
<tr>
<td>8</td>
<td>Tuesday</td>
<td>1-Mar</td>
<td>9</td>
<td>Gases</td>
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<td></td>
<td>Thursday</td>
<td>3-Mar</td>
<td>9</td>
<td>Gases</td>
</tr>
<tr>
<td>9</td>
<td>Tuesday</td>
<td>8-Mar</td>
<td>5</td>
<td>Thermochemistry</td>
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<td>Thursday</td>
<td>10-Mar</td>
<td>5</td>
<td>Thermochemistry</td>
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<tr>
<td>10</td>
<td>Tuesday</td>
<td>15-Mar</td>
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<td>Spring Break</td>
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<td></td>
<td>Thursday</td>
<td>17-Mar</td>
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<td>Spring Break</td>
</tr>
<tr>
<td>11</td>
<td>Tuesday</td>
<td>22-Mar</td>
<td>9 and 5</td>
<td>Gases/thermochemistry tutorial</td>
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<td></td>
<td>Thursday</td>
<td>24-Mar</td>
<td>Exam 3</td>
<td>Good Luck!</td>
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<tr>
<td>12</td>
<td>Tuesday</td>
<td>29-Mar</td>
<td>6</td>
<td>Electronic Structure and Periodic Properties of Elements</td>
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<td></td>
<td>Thursday</td>
<td>31-Mar</td>
<td>6</td>
<td>Electronic Structure and Periodic Properties of Elements</td>
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<tr>
<td></td>
<td>Tuesday</td>
<td>5-Apr</td>
<td>6</td>
<td>Electronic Structure and Periodic Properties of Elements</td>
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<tr>
<td>13</td>
<td>Tuesday</td>
<td>7-Apr</td>
<td>6</td>
<td>Electronic Structure and Periodic Properties of Elements</td>
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<td></td>
<td>Thursday</td>
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<td></td>
<td>- tutorial</td>
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<td>14</td>
<td>Tuesday</td>
<td>12-Apr</td>
<td>Exam 4</td>
<td>Good luck!</td>
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<td></td>
<td>Thursday</td>
<td>14-Apr</td>
<td>7</td>
<td>Chemical Bonding and Molecular Geometry</td>
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<tr>
<td>15</td>
<td>Tuesday</td>
<td>19-Apr</td>
<td>7</td>
<td>Chemical Bonding and Molecular Geometry</td>
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<tr>
<td></td>
<td>Thursday</td>
<td>21-Apr</td>
<td>7</td>
<td>Chemical Bonding and Molecular Geometry</td>
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<tr>
<td>16</td>
<td>Tuesday</td>
<td>26-Apr</td>
<td>8</td>
<td>Advanced Theories of Covalent Bonding</td>
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<td></td>
<td>Thursday</td>
<td>28-Apr</td>
<td>8</td>
<td>Advanced Theories of Covalent Bonding</td>
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<tr>
<td>17</td>
<td>Tuesday</td>
<td>3-May</td>
<td>8</td>
<td>Advanced Theories of Covalent Bonding</td>
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<tr>
<td></td>
<td>Thursday</td>
<td>5-May</td>
<td></td>
<td>Final exam tutorial</td>
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<tr>
<td>18</td>
<td>12-May</td>
<td>11:30-13:30</td>
<td></td>
<td>Cumulative Final Exam - Good luck!</td>
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</tbody>
</table>

**Institutional Information**

Please review the following institutional policies:

**Student Responsibilities**

- Students should allocate 4-6 hours per week to review material and complete the assigned work.

- UH Policy on Email Communication

  The electronic communications policy adopted in December 2005 establishes the University of Hawai‘i Internet service as an official medium for communication among students, faculty, and staff. Every member of the system has a hawaii.edu address, and the associated username and password provide access to essential Web announcements and email. You are hereby informed of the need to regularly log in to UH email and Web services for announcements and personal mail. Failing to do so will mean missing critical information from academic and program advisors, instructors, registration and business office staff, classmates, student organizations, and others.

- Academic Honesty

  In cases of suspected or admitted academic dishonesty, the instructor involved shall attempt to discuss the matter with the student. The instructor may bring the matter to the attention of the departmental chairperson for consultation. The instructor may require the student to redo the assignment, give a failing or reduced grade for the course, and/or refer the student to the Vice Chancellor for Student Affairs or designee through the Department Chair for possible college action under the Student Conduct Code. The Vice Chancellor for Student Affairs or designee shall pursue such cases to determine appropriate disciplinary actions if, after a preliminary
investigation, it is his/her determination that probable cause exists to establish that an act of academic dishonesty took place.

College Policies

• 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. Roy Inouye can be reached at (808) 235-7448, royinouy@hawaii.edu, or you may stop by Hale Kāko‘o 106 for more information. You shall also inform your instructor at the beginning of the semester; that information will remain confidential.

• Sex Discrimination and Gender-Based Violence Resources (Title IX)

Windward Community College is committed to providing a learning, working, and living environment that promotes personal integrity, civility, and mutual respect and is free of all forms of sex discrimination and gender-based violence, including sexual assault, sexual harassment, gender-based harassment, domestic violence, dating violence, and stalking.

If you or someone you know is experiencing any of these, WCC has staff and resources to support and assist you. To report an incident of sex discrimination or gender-based violence, as well as receive information and support, please contact one of the following:

Kaahu Alo, Student Life Counselor & Designated Confidential* Advocate for Students
Phone: (808) 235-7354
Email: kaahualo@hawaii.edu
Office: Hale ‘Ākoakoa 232
*confidentiality is limited

Desrae Kahale, Mental Health Counselor & Confidential Resource
Phone: (808) 235-7393
Email: dkahale3@hawaii.edu
Office: Hale Kāko‘o 101

Karla K. Silva-Park, Title IX Coordinator
Phone: (808) 235-7468
Email: karlas@hawaii.edu
Office: Hale ‘Ākoakoa 220

As a member of the University faculty, I am required to immediately report any incident of sex discrimination or gender-based violence to the campus Title IX Coordinator. Although the Title IX Coordinator and I cannot guarantee confidentiality, you will still have options about how your case will be handled. My goal is to make sure you are aware of the range of options available to you and have access to the resources and support you need.

For more information regarding sex discrimination and gender-based violence, the University’s Title IX resources and the University’s Policy, Interim EP 1.204, go to manoa.hawaii.edu/titleix/


How to Get Help https://windward.hawaii.edu/services-for-students/

• Academic Support
• Student Support Services  windward.hawaii.edu/MySuccess
  • Academic Advising
  • Financial Aid
  • Personal Counseling
• Technical Support Services

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.

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