

**Chemistry 131, CRN 84269**  
**PREPARATION FOR GENERAL CHEMISTRY**

**INSTRUCTOR:** Chester Dabalos (cdabalos@hawaii.edu)

**OFFICE:** Bilger 247B

**CONSULTATION HOURS:** 9-10 TR; 9-11 W

### **COURSE DESCRIPTION**

Provides background in algebra and elementary concepts of chemistry in preparation for General Chemistry I.

### **REQUIREMENTS**

**Textbook:** “Introductory Chemistry,” by Cracolice and Peters. Either pick the standard (for one semester) or unlimited access (good for two semesters). Getting the OWLv2 automatically includes an e-book. Check the “Study Tools” tab.

**Computer:** For watching videos and doing online requirements (see below).

The videos are from C-engage, featuring Profs. Gordon Yee and Dean Harman of Virginia Tech and Univ. of Virginia, respectively.

**Online Work (includes assignments, quizzes and exams): OWLv2**

**To login:** Check “Laulima OWL Registration CU” powerpoint in your Laulima for instructions.

You will gain access to OWLv2 by clicking the “Cengage OWL assignments” icon in your Laulima account.

**For technical support:** call 1-800-354-9706. Please note your case #, should there be a need to follow up.

### **Scientific Calculator and a handy Periodic Table of Elements**

### **STUDENT LEARNING OUTCOMES**

The goals student learning outcomes for Chemistry 131 are:

- Understand atomic structure and compound formation.
- Appreciate trends in physical and chemical properties of elements based on the periodic table.
- Use conversion factors and rearrange equations to perform calculations.
- Balance chemical equations, classify reactions, predict products of precipitation reactions
- Apply the mole concept and unit analysis in solving stoichiometry problems.

### **COURSE TASKS**

**Read and listen to powerpoint lectures. Watch the online videos, simulations and demonstrations.**

**Come to class and participate. Do not be afraid to ask questions.**

**Accomplish homeworks, quizzes and exams using OWLv2.**

### **GRADING**

Grades will be determined from homeworks, quizzes and three exams.

<u>Evaluation</u>	<u>Percent of Course Grade</u>
Homeworks	10%
Quizzes	15%
Exam 1:	25%
Exam 2:	25%
Finals:	25%

Check your browser requirements the first time you sign in to be sure you can view the problems correctly and submit your work. Contact C-engage technical support (see above) if you are having trouble.

The passing grade for a homework is 70%. Three tries will be allowed. All homework is due at 11:50 pm on the deadline (on Fridays of the specified week). Start working on the homework before the due date! You can (and are encouraged to!) re-work homework questions after the assignment has been submitted to help you study for the exams.

In addition to these graded homeworks, four introductory exercises and Math Review are included to improve your proficiency in using the OWLv2 software and with chemistry, in general.

Quizzes will available from 1pm to 8pm on the assigned date (on Mondays of the specified week) and will have a time limit. In contrast to homeworks, quizzes will have a time limit and only one try is allowed. Use quizzes to prepare you for the exam.

There is an exam for every module (scheduled on Fridays). You have the option of taking the exam in a UH or a community college testing center, where you will be proctored (extra instructions will be given during the exam week). Else, contact ProctorU (proctor.com). ProctorU charges by the hour. Please email me whether you would like to have the exam in a testing center or through ProctorU, a week before the exam. I need to plan beforehand.

A password will be mailed (to the proctor) a minute before the exam starts. You can bring a 3" by 5" index card with anything written on it (equations, conversion factors and constants). A bigger index card (4" by 6") is allowed for the finals. **No-make up exam will be given**. For missed exams, a medical note, police report, or obituary notice is required. The final exam may be used to replace the missed exam, given a valid and documented reason.

### **Late Policy**

Deadlines will not be extended. Do not waste your time asking me for extension (except with valid medical reasons). Please check that your computer is configured to Hawaii time.

Never wait for the last minute for help. I can not answer emails a few hours before the deadline. Plan to email me before **5 pm** (on the day of the deadline) should you like to ask for assistance.

Plan to **spend 1-2 hours outside of class every day** working on homework and reviewing the material covered in class. The best way to get better at chemistry is to **PRACTICE SOLVING PROBLEMS**.

### **KOKUA [www.hawaii.edu/kokua](http://www.hawaii.edu/kokua)**

If you are a student with a disability, please contact KOKUA to make arrangements to provide you with the best learning environment possible. I will be happy to work with you and KOKUA to address your access needs.

### **OTHER POLICIES**

1. Topics and schedule are listed on the next page, although this may be modified at the instructor discretion (especially if we needed more time for a certain topic).
2. Cheating and any other form of academic dishonesty will result in an "F" for the class.
3. Announcements will be sent by email.
4. Lecture notes will be posted on Laulima.

### **OTHER RESOURCES (aside from me)**

- 1) Learning Emporium
- 2) Learning Assistance Center
- 3) online learning academy
- 4) housing success center

Lastly, if you are a student athlete, there is an additional tutoring system. Contact your advisor.

### **ADVICE FOR CONTACTING ME ([cdabalos@hawaii.edu](mailto:cdabalos@hawaii.edu))**

- 1) Email is the best way to contact me, and I make every effort to answer student emails within 2 business days.
- 2) Per departmental policy, I will only respond to emails sent from an @hawaii.edu address.
- 3) In the event that you would like to see me in person, please see me in my consultation hours at the chemistry department. Kindly email me in advance, indicating the exact time you are coming.
- 4) You may also meet with me through Skype. Please email me and I will give the details.

**COURSE SCHEDULE**

## CHEMISTRY 131 TENTATIVE SCHEDULE

Wk	Topics/Important Information
Jan 7	Course Policies (read course syllabus)
	Introduction to C-engage; Registration to OWLv2
Jan 14	<b>Math Review I, Module I</b> ; States of Matter; Physical vs Chemical Change; Pure Substances and Mixtures
	Scientific Notation; Significant Figures
	<a href="#">HMWK 1</a> Units and Conversion
Jan 21	<b>MLK Day</b> Temperature
	Density;
Jan 28	<a href="#">QUIZ_1</a> Dalton's Atomic Theory; Subatomic particles
	Isotopes
	<a href="#">HMWK_3</a> Atomic Mass; Avogadro's Number
Feb 4	Chemical Families; Intro to Periodic Table
	Electron Configuration
	<a href="#">HMWK 4</a> Trends in Periodic Table
Feb 11	<a href="#">QUIZ_2</a> Metals vs non-metals;
	<b>EXAM_1</b>
Feb 18	<b>Presidents' Day</b> <b>Math Review, Module II</b> ; Ionic vs Covalent Compounds;
	Electronegativity and Polarity
Feb 25	Lewis Structure
	Lewis structure (continuation)
	<a href="#">HMWK 5</a> VSEPR
Mar 4	Nomenclature of ionic and covalent compounds
	Nomenclature of acids
	<a href="#">HMWK 6</a> Dissociation of acids
Mar 11	<a href="#">QUIZ_3</a> Polyatomic ions;
	Molar masses; Avogadro's number
	<a href="#">HMWK 7; HMWK 8</a> Molecule-mole relationships
Mar 18	<b>Spring Break</b>
Mar 25	<a href="#">QUIZ_4</a> % composition; Empirical vs molecular formula;
	<b>EXAM_2</b>
Apr 1	<b>Math Review III, Module III</b> ; Types of chemical reactions Writing and balancing chemical equations
	<a href="#">HMWK_9</a>
Apr 8	Energy in reactions Units of Concentration
	<a href="#">HMWK 10</a> Dilutions; pH scale
Apr 15	<a href="#">QUIZ_5</a> Percent yield
	<a href="#">HMWK 11</a> Limiting reagent
Apr 22	Individual Gas Laws Combined Gas Laws
	<a href="#">HMWK 12</a> Ideal Gas Equation;
Apr 29	<a href="#">QUIZ_6</a>
TBA	<b>FINAL EXAM</b>