

CHEM 161

Fall 2018

Dr. Kayla Gary:

CHEMISTRY 161: GENERAL CHEMISTRY I

INSTRUCTOR: Dr. Kayla Gary

EMAIL: kmgary@hawaii.edu

LECTURE HOURS: CRN 80382: TR 12:00 – 1:15pm in Bilger 152

OFFICE HOURS: MWF 12:20 - 2:00pm in Bilger 247A (and by appointment)

REQUIRED MATERIALS

- Textbook: Chemistry: A Molecular Approach, by Nivaldo Tro, 4th Edition, Pearson. ISBN 978-0558-29865-4.
- Pearson access code for using “Mastering Chemistry,” on-line homework (new textbooks include access code, used textbooks do not include access code and must be purchased separately). PLEASE REFER TO MASTERING CHEMISTRY REGISTRATION INSTRUCTIONS FOR MORE DETAILS.
- iClicker for in-class participation credit. PLEASE REFER TO iCLICKER REGISTRATION INSTRUCTIONS FOR MORE DETAILS.
- Scientific calculator (graphing or non-graphing).

CHEMISTRY 161 TENTATIVE LECTURE SCHEDULE (3 UNIT COURSE)

Week	Tuesday	Thursday
Week 1 Aug 20 th – 24 th	Introduction to Chemistry 161 Chapter 1: Matter, Measurement, & Problem Solving Chapter 2: Atoms & Elements	
Week 2 Aug 27 th – 31 st	Pre-Exam 1 Tues Aug 28th: Chemistry 131 Topics Chapter 2: Atoms & Elements	
Week 3 Sept 3 rd – 7 th	Chapter 3: Molecules, Compounds, & Chemical Equations	
Week 4 Sept 10 th – 14 th	Chapter 3: Molecules, Compounds, & Chemical Equations Chapter 4: Chemical Quantities & Aqueous Reactions	
Week 5 Sept 17 th – 21 st	Chapter 4: Chemical Quantities & Aqueous Reactions	
Week 6 Sept 24 th – 28 th	Exam 1 Tuesday September 25th: Chapters 1-3 Chapter 4: Chemical Quantities & Aqueous Reactions	
Week 7 Oct 1 st – 5 th	Chapter 7: The Quantum-Mechanical Model of the Atom	
Week 8 Oct 8 th – 12 th	Chapter 7: The Quantum-Mechanical Model of the Atom Chapter 8: Periodic Properties of the Elements	
Week 9 Oct 15 th – 19 th	Chapter 9: Chemical Bonding I: The Lewis Model	
Week 10 Oct 22 nd – 26 th	Exam 2 Tuesday October 23rd: Chapters 4, 7, 8 Chapter 9: Chemical Bonding I: The Lewis Model	
Week 11 Oct 29 th – Nov 2 nd	Chapter 10: Chemical Bonding II: Molecular Shapes, VB Theory, MO Theory	
Week 12 Nov 5 th – 9 th	No Class Tues Nov 6th: Election Day Chapter 10: Chemical Bonding II: Molecular Shapes, VB Theory, MO Theory	
Week 13 Nov 12 th – 16 th	Chapter 5: Gases Chapter 6: Thermochemistry	
Week 14 Nov 19 th – 23 rd	Exam 3 Tuesday November 20th: Chapters 9 + 10 No Class on Thurs Nov 22nd: Thanksgiving Holiday	
Week 15 Nov 26 th – 30 th	Chapter 6: Thermochemistry	
Week 16 Dec 3 rd – 7 th	Last Day of Instruction: Thursday Dec 6th	
FINALS Week Dec 10 th – 14 th	Cumulative Final Exam: Thursday Dec 13th 12 – 2pm in Bilger 152	

Changes may be made at any time at the discretion of the instructor

GRADING & EVALUATION SYSTEM FOR CHEMISTRY 161 LECTURE:

HOMEWORK (10%): Homework will be completed on-line through Pearson's interactive homework system called "Mastering Chemistry." To access the homework on-line, go to masteringchemistry.com. You will need an access code from Pearson to access Mastering Chemistry; the code comes with any new book purchased, or can be purchased separately on-line if the book is bought used or is being re-used from a previous semester. You will also need the course code, "**CHEM161FALL2018GARY**" and your school ID# in order to register for our class homework. **Homework is due on various days; you are responsible for submitting your homework on time. No late homework will be accepted.** Please see the registration instructions on Lulima for how to correctly register for Mastering Chemistry. There is an abundance of homework problems to practice for each chapter. **In order to receive full credit for each chapter's homework, you must complete 20 POINTS per chapter.** Each chapter has ~80 points worth of problems available to practice, however you will only receive credit for up to 20 POINTS per chapter.

IN CLASS PARTICIPATION WITH ICLICKER (10%): The iClicker 1, iClicker 2, or any personal device such as a cell phone, laptop, or tablet will be used to assess in class attendance and participation during lecture and will account for 10% of your overall grade. Questions answered in lecture will not be graded for accuracy but rather for participation and engagement in the course. Please see the registration instructions on Lulima for how to correctly register your iClicker and sync your account to Lulima. Participation credit will be assessed starting on the second week of school.

EXAMS (60%): Four multiple choice exams will be given throughout the term. The first exam ("Pre-Exam 1") will cover chemistry 131 topics (topics that should be mastered before entering into this course) on August 28th, one week after the course begins and is worth 5% of the overall grade. This gives students an opportunity to ensure they are appropriately enrolled in chemistry 161 and an option to transfer back to chemistry 131 if necessary. The remaining three exams will be given to determine students' level of mastery of chemistry 161 material and will cover approximately 3 chapters each. Exam 1 will count for 15% of the overall grade, and Exam 2 and Exam 3 will count for 20% of the overall grade.

Make-up exams will not be given and will be given only on the assigned day and time. Only excused medical absences will allow students to take an exam at a later date. Otherwise, no credit will be given. The instructor cannot make accommodations for conflicting work schedules, vacation plans, or any other non-emergency situations. Any medical emergency must be documented by a hand-written doctor's note by a local doctor with a physical address and phone number on the heading of the note. Make-up exams are always at the discretion of the professor, regardless of the medical excuse.

FINAL EXAM (20%): There will be a multiple choice cumulative final exam given at the end of the course and will count for 20% of your total lecture grade. **The final exam will be given on Thursday December 13th from 12:00-2:00pm in Bilger 152.** Make-up exams will not be given and will be given only on the assigned day and time.

GRADING: The grading scale for lecture is as follows:

Overall %	Grade Earned
98% or Above	A+
93-97%	A
90-92%	A-
88-89%	B+
83-87%	B
80-82%	B-
78-79%	C+
73-77%	C
70-72%	C-
68-69%	D+
63-67%	D
60-62%	D-
59% or Below	F

*Scores *may* be curved at the end of the curve and is up to the discretion of the professor.

INSTRUCTOR METHODS & COURSE POLICIES

Students should read the textbook for the upcoming lecture material prior to coming to class, **as well as take many hand-written notes in lecture to enhance learning.** You are encouraged to go to the office hours of the professor or *any* TA for help working through chemistry problems. Additionally, the Learning Emporium has knowledgeable people willing to help with Chemistry 161 as well as other math and science courses.

Students are responsible for keeping track of their own points along with the instructor. It is essential that students retain all returned assignments and course information. Late work will not be accepted; students must turn in assignments at assigned dates and times only. Every student is accountable for all work missed. Instructors are under no obligation to make special arrangements for students who are absent.

ATTENDANCE: You are required to attend the lecture section for which you are enrolled. The instructor reserves the right to request student ID verification at any time during this course. You may be dropped from the course if you have consecutive unexcused absences in lecture.

STUDENTS WITH DISABILITIES

Students with conditions that may require classroom or test accommodations are encouraged to contact me privately and contact the KOKUA Program (the Office for Students with Disabilities). KOKUA can be reached at (808) 956-7511 or (808) 956-7612 (voice/text) in Room 013 of the Queen Lili'uokalani Center for Student Services.

ACADEMIC DISHONESTY & CONDUCT

Any act of plagiarism, or any other attempt to defraud the academic process will meet with reprimand and possible dismissal from the course without credit. Cheating in any form on an assignment will, at a minimum, result in a zero grade on that assignment and the filing of an Academic Dishonesty Report Form describing the incident with the Vice President of Student Affairs. Prior or future cheating incidents anywhere in the university could result in expulsion. Cheating includes: the copying or exchanging of information during exams or quizzes, using banned materials, information, or devices during exams/quizzes, and plagiarism. Exact reproduction of written materials from other students on any lab report will result in all parties receiving a zero. An on-line version of the Academic Honesty Policy for the university can be found at:

http://www.studentaffairs.manoa.hawaii.edu/policies/conduct_code/

CHEM 161

Fall 2018

Dr. Ralf Kaiser:

CHEMISTRY 161
General Chemistry I
Fall 2018

T Th, 10:30 - 11:45
Bilger Hall 152

Prof. Ralf I. Kaiser
Office Hours M, 1:00-2:00
Bilger Hall 301
ralfk@hawaii.edu

WEEK	TOPIC(S)
Aug 20 – August 26	Chapter 1, Chapter 2
Aug 27 - Sept 2	Chapter 2 (cont.), Chapter 3
Sept 3 – 9	Chapter 3 (cont.)
Sept 10 – 16	EXAM #1, TUESDAY, SEPT 11 (CHAPTERS 1-3) Chapter 4
Sept 17– 23	Chapter 4 (cont.), Chapter 5
Sept 24 – Sept 30	Chapter 5
Oct 1 – 7	EXAM #2, TUESDAY, OCT 2 (CHAPTERS 4-5) Chapter 6
Oct 8 – 14	Chapter 6 (cont.), Chapter 7
Oct 15 – 21	Chapter 7
Oct 22 – Oct 28	Chapter 8
Oct 29 – Nov 4	EXAM #3, TUESDAY, OCT 30 (CHAPTERS 6-7) Chapter 9
Nov 5 – 11 (Holiday November 6)	Chapter 9
Nov 12 – 18	Chapter 9
Nov 19 – Nov 25 (Holiday November 22)	EXAM #4, TUESDAY, NOV 20 (CHAPTERS 8-9)
Nov 26 – Dec 2	Chapter 10
Dec 3 – 6	Chapter 10 (cont.)

**THE FINAL EXAM COVERS CHAPTERS 1 – 10 AND TAKES PLACE ON
TUESDAY, DECEMBER 11, 9:45 am - 11:45 am, BILGER 152**

General Information

Required Text: *Chemistry – A Molecular Approach*; Forth Edition, Nivaldo Tro

Required Supplement: *Solutions Manual – Fourth Edition*.

Homework: You should solve as many problems for each book chapter as you can. The homework will neither be collected nor graded, but it is highly recommended that you take the time to solve these problems. Answers to these problems are in the Appendix of *Chemistry – A Molecular Approach*; full solutions are in the *Solutions Manual*. This is an essential part of the study of chemistry, and your score on the exams will reflect your problem-solving ability. There is no substitute for practice. The more problems you will solve, the better your score will be. Typically, each week of chemistry 161 lectures requires **at least 15 hours** additional time for revisions and homework. For each chapter, practice exams are posted, which have the same style as the midterms/final; hence it is important for you to solve them (<http://www.chem.hawaii.edu/Bil301/CHEM161.htm>).

Tools: You must use a calculator to solve the problems in this course. Calculators are permitted during exams, and you should bring one. Calculators must not be shared during exams. Also, you shall bring a No. 2 pencil to the exams. We will provide a copy of the periodic system of the elements for each of you during the exams.

Examinations: Your grade in this course will be based entirely on your performance on the examinations. Four midterms (75 min) and one final exam (120 min) will count 20 % each. Similar to the practice exams, all exams are multiple choice and are scored by a computer. **All exams are closed book exams and will NOT be curved. No dictionaries or translators must be used.** You must bring your student ID to the exam; no exams will be accepted without ID.

Exam results will be posted on (<http://www.chem.hawaii.edu/Bil301/CHEM161.htm>) and are available typically within 72 hours. **IMPORTANT:** you need a pin number to access your score, which will be emailed to you after the first midterm. This pin number is identical for all exams and will be distributed only *once*. Do not misplace it. If you misplace this pin number, it can be **only** retrieved during office hours in person with your UH ID, but not via email.

Examination Absences: *No* makeup exams will be given. Absence from an examination will be excused *for illness only if certified by a written statement from a physician*. If you cannot provide this statement, a score of zero will be assigned. We will confirm your statement with your physician if needed to avoid fake certifications. **Only one exam can be excused.**

Tutorial Room: In addition to my announced office hours, ***Bilger Addition 209*** will be available as a study/tutorial room. This room will be staffed by graduate teaching assistants (TAs). Please check the posted schedule for the room number and the times when tutors will be available. If the TAs cannot answer your questions, please email me their names, and we will take care of this.

Lectures: Copies of the lectures will be posted on the internet (<http://www.chem.hawaii.edu/Bil301/CHEM161.htm>). It might be a good idea to print the files prior to the class. Since suggestions for your exams and homework will be given throughout the class, the ppt files alone **do not** substitute the class. Therefore, it is highly recommended that you show up for each class. Based on past experience, those students which skip classes or do not complete the homework will fail; also students who do not invest at least 15 hours per week will fail; typical failure rates of CHEM161 are in the order of 35-40 %. **NO EXTRA CREDITS WILL BE GIVEN.**

Cell Phones: Please turn off your cell phones in class.

Emails: Due to the volume of emails received, it might take up to 72 hours to reply. If you have urgent questions, you should come to my office hours or visit the TAs in Bilger Addition 209.

Academic dishonesty is not tolerated. Students must follow the Student Conduct Code; as done in the past, students violating this code will be expelled from this class and awarded a grade 'F' as a course grade
(http://studentaffairs.manoa.hawaii.edu/policies/conduct_code/).

IMPORTANT: A grade of 'C' will be required to move from CHEM 161 to CHEM 162.

Have Fun and Study Hard!