

Chemistry 1A Syllabus
Laney College – Spring 2019

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¹ This is the general sequence by which we will cover the material, there is a separate handout with the detailed schedule.

Class Information

Course Name: General Chemistry

Course Number: Chemistry 1A (21475 Lecture; 21476 Lab)

Class Meeting Days and Times:

Lecture TTh 09:00-11:50 am Room D-200 (Professor: Abraham Reyes)

Lab F 09:00-11:50 am Room L-A-236 (Professors: Abraham Reyes)

Prerequisite: *Intermediate Algebra* at the level of **Math 203** or **Math 211D**. Please, read the “What knowing intermediate algebra means” to find out what and at what level is expected from you regarding this prerequisite.

Lecturer: Professor Abraham Reyes, PhD.

Office Location: Lab. A 236a

Office Phone: (510) 464-3269 (I do not really use the phone, *please e-mail me instead*. See below.)

Office Hours: TThF 12:00-1:00 PM (Any changes will be announced in class).

To reach each other:

E-mail Address: areyes@peralta.edu Please *include “CHEM 1A” in the subject line* of any e-mail you send to me; if I don’t know you, I’ll erase the e-mail. Also, give your full name and ID# on the closing part of your emails.

Your e-mail: *I will send group e-mails to your Peralta account*; so please, make sure you check your Peralta e-mail, or you can also use the feature to redirect your Peralta e-mail to the e-mail account you use the most (your choice!).

Class Website: We will be using Canvas. You can get access to the website (you must be enrolled in class) through the Canvas Peralta Portal: <http://web.peralta.edu/portal/welcome-to-the-peralta-portal/canvas/>

Check the website often since that is the way I will communicate with you – and give notice of any changes to our class.

Note: Exchange phone numbers/e-mails with your classmates so that you can be informed timely of all changes (in case you miss class); also, so that you can form study groups to practice/study together (*strongly encouraged!*).

Required Textbooks and Equipment:

1. Text: Brown, LeMay, Bursten, Murphy, Woodward, Stoltzfus. Chemistry The Central Science. 14th Edition, Pearson. (ISBN: 978-0134414232).

2. Fossum, Chemistry 1A: Lab Manual, Laney College, Version B; 2002, Laney IMC. (*It will be posted online.*)

3. Students Lab Notebook – A bound notebook with numbered duplicate pages, such as the one by Hayden-McNeil (100 pages). More details will be discussed during the first Lab session (no need to bring a Lab notebook then).

4. A nonprogrammable scientific calculator. *Instructor’s Recommendation:* Texas Instrument TI-30XA (it is simple and inexpensive). Make sure you get acquainted with the way your calculator works (you will need to know how to use it relatively well). No other gadget can be used during exams and quizzes.

Course Description

The courses Chemistry 1A and 1B, comprise a one-year, college level, introduction to the basic concepts, principles and methods of general chemistry. In Chemistry 1A we will cover chemical reactions, stoichiometry, atomic theory, chemical bonding and behavior of states of matter, solutions, reactions in aqueous solution and thermochemistry.

Lecture Schedule: We will be covering the following chapters, *in this order* (for a detailed outline of when the different sections of every chapter will be covered, please see/download the schedule from the website):

Chapter 1 – Matter Energy and Measurements
Chapter 2 – Atoms, Molecules and Ions
Chapter 3 – Chemical Reactions and Reactions Stoichiometry
Chapter 4 – Reactions in Aqueous Solution
Chapter 10 – Gases
Chapter 5 – Thermochemistry
Chapter 6 – Electronic Structure of Atoms
Chapter 7 – Periodic Properties of Elements
Chapter 8 – Basic Concepts of Chemical Bonding
Chapter 9 – Molecular Geometry and Bonding Theories
Chapter 11 – Liquids and Intermolecular Forces
Chapter 12 – Solids (*just the first two sections*)
Chapter 13 – Properties of Solutions

Method of Instruction: In a nutshell, this course is a guided lecture, which means I am here to help, but you must be actively involved in the learning process. Please, read the “What CHEM 1A is all about” handout for a more detailed discussion. Keep the following in mind:

A) *Guiding notes are provided.* These notes have questions that help you focus on key concepts we will cover during lecture (and room for you to take brief notes). The examples and problems on the notes will be worked out in class with the help of students.

B) Questions will be asked and are expected to be answered by the students; so, you must read the material (and/or watch the suggested videos) ahead of lecture/Lab in order to be able to participate in class – I will give extra points for participation in class, which includes solving certain problems as well.

C) The exams and quizzes are written under the assumption that you have attended lecture, read the text, solved the worksheets provided and done the homework.

Student Learning Outcomes (SLO's):

By the end of this course, you are expected to have learned to:

1. Solve all types of quantitative chemistry problems and demonstrate reasoning clearly and completely on written exams. Integrate multiple ideas in the problem-solving process. Check results to make sure they are physically reasonable.
2. Explain qualitative chemical concepts and trends clearly on written exams.
3. Describe, explain, and model chemical and physical processes at the molecular level in order to explain macroscopic properties on exams.
4. Manipulate laboratory equipment effectively in the laboratory. Perform lab techniques correctly using appropriate safety procedures.
5. Analyze the results of laboratory experiments and evaluate sources of error. Synthesize this information and express it clearly in written laboratory reports.
6. Design and construct accurate graphs. Interpret graphs correctly.
7. Maintain a laboratory notebook according to standard scientific guidelines

Grading Policy and Method of Evaluation

There will be some ten 25-point quizzes, three exams worth 150 points each, and a final exam which is worth 250 points. The laboratory assignments are usually worth 20 points (your Lab Notebook will be evaluated too). Homework will be assigned, but not collected. The approximate total number of points assigned to each of these categories goes as follows:

Quizzes (10×25)	≈ 250 points	
Exams (3×150 points)	450 points	
Final Exam	250 points	Mandatory (It is comprehensive!)
Laboratory Reports	≈ 250 points	
Studying skills	30 points	(See note 3 on the grades below.)
<u>Class Participation</u>	≈ 60 points	
Tentative Total	1,290 points	

Grades will be assigned as follows:

90.0-100 %	A
80.0-89.9 %	B
65.0-79.9 %	C
50.0-64.9 %	D
under 50.0 %	F

The above information means that, *in principle, everyone can get an A or a C*. You can calculate your grade at any time by dividing the total number of points you have earned by the total number of points possible so far, and then multiplying by 100 to get a percentage. Most of the times, though, if I notice a student does a good job in class, I take his or her points as the top of a curve to grade everyone else (this will depend on how the class goes).

Notes on the grades, please read carefully:

- 1) You must pass (get more than 75 points) at least on two out of the three partial exams, or you will receive an F in the class, no matter how many other points you may have. Keep in mind that constant values and most equations are provided for each test; so, focus on understanding ideas instead of just memorizing information.
- 2) If you do not pass an exam, the requirements to take the next one are: **a)** come to see me – the week after you receive your test back – with a brief reflection (hand-written, one paragraph or two) on what happened, and **b)** complete at least 30 minutes of tutoring with me (it may not be individual due to the number of students).
- 3) You automatically get the Studying skills points (10) for every exam you pass with 98 points or more (equivalent to a “C” or higher grade). If you fail an exam or get 97 points or less (“D” or F), then – as noted above – you must get some tutoring with me, after which you will obtain these Studying skills points.
- 4) The **final exam** is worth 250 points exactly and you cannot disregard its importance (or your grade may drop dramatically). Nevertheless, you will be allowed to use a cheat-sheet on the final (**only** on the final exam). The cheat-sheet is only one side of an 8½” by 11” page (you can type it, if you like).

Exams: The chapters covered in every exam are outlined on the schedule (study guides are provided). Due to the nature of Chemistry, the exams are cumulative – at least to some extent – and the final is comprehensive. The exams will take place the following dates: Feb/28, Apr/16, May/14 and the final will be on May/21.

Note: There will be no make-ups possible for exams or quizzes. If you miss an exam or quiz, it will ordinarily count as a zero. If an **emergency** comes up, you must **notify me before the evaluation** (send me an e-mail). For an **excused absence**, you may be assigned a score calculated from your other exam scores – which you must pass.

Quizzes: They take place **every Thursday** (unless there is an exam that week –see the schedule), right at the time our class begins; thus, it is important that you show up to class in time. No make-up quizzes will be given. The quizzes are always on topics we already covered in class and for which you already had the opportunity to ask questions. Bear in mind they may also include questions from the Lab Experiments.

Homework: Assignments **will not be collected**. Please, avoid the pitfall of thinking homework does not matter because you do not get points for it. The truth is: *if you do not do the homework, and specially the worksheets, you will not perform well on the quizzes and exams* (i.e. getting a good grade will be your reward). Detailed solutions to all of the problems are found in the solutions manual (recommended, but not required. Ask me if you want to see the solution to a particular problem). Remember: to do a good job in this class, you must be able to do these and similar problems on a exams and quizzes, without the help of the solutions manual or answer key. In order to learn how to do the problems, you need to struggle with them for a while. Do not turn to the solutions manual or answer key too soon. Feel free to ask me, or your peers, if you find a problem is particularly difficult. Also, sometimes the solutions manual or the key contains mistakes. Do not go against your better judgment and write down a wrong answer just because it is in the solutions manual or the key.

Extra Credit: *There will not be extra credit assignments* in this class, no make-up tests, and no retaking exams. It is therefore very important that you learn the material **before** being tested on it; nevertheless, *I do normally give extra points towards the exams through participation in class*. I also give extra points *if you detect a mistake on the worksheets and/or their keys* –send me an email with a picture.

Laboratory: The date of each lab is listed in the class schedule. Please *check the schedule because the lab experiments are not sequential*. Unless specified, you should come to class with the **pre-lab** written on your lab notebook. Each student must have their own lab notebook; lab notebooks cannot be shared. You **must collect two signatures every lab experiment**: one for the pre-lab (when you arrive) and one for the data collected (by the time you leave) in order to get the full credit for the experiment.

Overall, **you are graded on the write-up, quality of work, and analysis of results**. **Students who do not bring the pre-lab will not be allowed to stay and work on the experiment, no exceptions!** During the Lab Experiment, you will record all observations and data directly into your lab notebook with pen (points will be deducted if you write elsewhere or use a pencil). The finished lab should have a purpose, a procedure, a data table (if requested), a calculations section, a results table, an evaluation section, and final questions. To find out how you will specifically be graded on the lab, please refer to the lab handouts in the Lab folder of the website for our class (see page 1 for the link). Any work that is deemed illegible will be marked down.

Due dates for Lab Reports: They are *already on the schedule*. In general, Lab Reports are *due one week after* the day the experiment is completed (any changes will be announced timely in class and posted in website for the class). Points to keep in mind:

A) **You are expected to turn in your work in time and form**. Getting used to *turn in quality work when it is requested, is one of the most valuable assets in any professional worker*; therefore, **incomplete lab reports or late lab reports will not be accepted** (unless an extraordinary situation takes place and it can be confirmed).

B) Also, you must come to your assigned lab, not any lab time that you feel like. **You cannot turn in Lab work for a day you were absent (this includes your partners work)**.

Your lab reports and the pre-lab(s) for a particular day must be turn in the moment you get to the lab (please leave them by the desk on L-A236). You must be present for the introduction to the experiment. If you fail to be there in time, you will not be allowed to stay. One of the objectives of this course is to give you practice in various lab techniques, so, if you miss lab often, you won't get this essential practice. Hence, **if you miss 4 or more lab experiments, you cannot pass this course**, no matter how many other points you have.

Attendance and Class Policies

Attendance: *It is mandatory.* According to Laney College policy, you will be allowed a total of six absences. **If you are absent from class seven or more times, you will receive an F** (regardless of your grade).

Here you have *another reason not to be absent*: From time to time I deviate from the text (to emphasize the material in a different way and/or to point out things you must know); therefore, to do well in this course, you must attend the lectures. Also, if you miss class or come in late, it is your responsibility to find out what you missed, including handouts, assignments and due dates (again: exchange phone numbers/e-mails with your classmates so that you can get this information if you need it). You are responsible for knowing when exams will take place and all due dates. Being "misinformed by another student" is not an excuse for missing an exam or not turning in your work. Again, check the website, and your Peralta e-mail, to look for schedule updates and other important announcements.

Tardiness: *You are expected to arrive to class in time. All the quizzes will take place during the first 20-25 mins or so of the class, and no one will be taking the quiz later or be given extra time; furthermore, I review the material from the previous class during the first few minutes of each lecture;* so please, do not be late. You must factor your commuting time on your schedule, since **every three times you are late will count as an absence** (see attendance above). For Lab, if you are not present to listen to the pre-Lab discussion, you will not be allowed to stay, which in turn will be taken as an absence.

Students with special needs: *I wish to make this course as accessible as possible to students with disabilities that may affect any aspect of course assignments or participation.* I encourage you to communicate with me by the second week of the course regarding any accommodations that will improve your experience in (or access to) this course. You can also contact the Disability Services and Programs for Students (DSPS) at 464-3428 for assistance.

Drops/Withdrawals: *Enrolling-in or Dropping the class is your prerogative* and you are in charge of it; therefore, **I will not drop you from the class just because you stop coming...** you must do it yourself (or get an F at the end). Laney's procedures indicate that the last date to drop full-term credit classes without a "W" appearing on transcript is Sunday, February 3rd, and the last date to drop and receive a "W" is Friday, April 26th.

No Shows and Auditing Classes: *Students who are not present the first class meeting will be dropped* and their seat will be given to a student on the wait list; also, Peralta Board Policy does NOT permit students to audit classes. Class attendance is limited to students who are officially enrolled. (See the Laney College Catalog, p. 29).

Conduct: Disruptive or insulting behavior, willful disobedience, habitual profanity or vulgarity; or the open and persistent defiance of the authority of, refusal to comply with directions of, or persistent abuse of, college employees in the performance of their duty on or near the school premises or public sidewalks adjacent to school premises will be subject to disciplinary action.

Technology Policy: To get participation points in class for solving problems, you must bring a simple scientific calculator (refer to "Required Textbooks and Equipment", point 4, on page 2 above). You are welcome to use a laptop or tablet to follow the class and work on problems; however, **if a student uses technology for other purposes while in class (Lecture or Lab), this permit will be revoked and a no technology policy will be enforced** (be very mindful of this!). Specifically, if after a couple of warnings, a student continues to use social media while in class, he/she will be dismissed for the rest of the class at that moment and suspended for the next class (no exceptions!).

Cellphones: Please be considerate and **make sure that your cell phone is on vibration mode (turned off if possible)** during lecture and lab. Also, if **you receive a text message and you need to answer it right away, please step outside and do it.** We will all need to concentrate in this class and ringing phones are incredibly distracting. A student who willfully and/or persistently misuses a cell phone in one of the ways described above will be subject to disciplinary action. Also, as it is the case with the technology policy, *if a cellphone is used to access social media while in class, after given a couple of warnings, the student will be dismissed for the rest of the class at that moment and suspended for the next class (no exceptions!).*

Plagiarism/Academic Dishonesty Policy:

It is fine to discuss your lab work with each other and help each other, but it is *not OK to:*

- a. copy sentences or paragraphs from other students or to allow another student to copy from you.
- b. misreport or alter the data in any way.

Also, **if you are observed cheating on an exam or quiz, you will get a zero on the assignment and be subjected to a disciplinary process.** If I see you looking at someone else's paper, talking, laughing, or exchanging any sort of materials or equipment (like calculators), I will assume you are cheating; so please, make sure you keep your eyes on your own paper and focus on your work, and bring your own equipment. If you have a question or if you need something during a test, raise your hand, do not ask your neighbor.

Advice: Do not get behind. The nature of any chemistry class requires a fast pace – nothing new here! This means that you will be expected to absorb a large quantity of material in a short period of time and retain it, and since Chemistry is cumulative, *once you get behind, it is almost impossible to get caught up; so, review your lecture notes and work some problems daily.* You must study before and after the class in order to do a good job; on average, this class requires some 20 hours per week in work and studying; you need to keep this in mind when you figure out your schedule for this term, and... Keep Up With The Work! This stuff takes practice. In order to understand the material, you need to be actively involved in the learning process. This means trying to do problems on your own, doing the examples in the book, being focused in lecture and lab, and asking for help when you need it.

A final note: "Laney College does not discriminate on the basis of age, race, color, gender identity, sexual orientation, national origin, or disability."

In view of the above, at the end of the semester, I will give you the grade you earn. If you "need" a B, you must do B work during the course. I will also not give you a lower grade than you earned. If you complete the class, I will not give you an incomplete. It is fine to ask for clarification on grades, but do not argue with me about your grade.

The purpose of the policies outlined, some of which might seem a little harsh, is to guard against students being dishonest, manipulative, or unreasonable (it does happen sometimes, believe me!). I want you to approach this class honestly, take responsibility for yourself, and start being professional at what you do (if you have not started yet). The way this class is outlined will help you to obtain valuable tools that you will be able to apply in many different areas and, undoubtedly, they will open many doors in your way to success.

Very Important

You MUST turn in both: the following agreement and the Chem IA – Survey to remain in class.

Go to the next page. ⇒

Chemistry 1A Syllabus
Laney College, Spring 2019
Professor Abraham Reyes, PhD.

The following is required:

1. Please, read these handouts before you continue (checkmark each box after).

- What CHEM 1A is all about.
- What knowing intermediate algebra means
- How to answer questions.

2. Turn-in this signed agreement next class, along with the “Syllabus Highlights Questionnaire” and the “Chem 1A Survey”. It is a requirement to remain in class.

I have completed both steps described above; and I have also read the information and policies outlined on this syllabus; and, by signing here, I am agreeing to abide by them.

Name (as it appears on the official roster):

Last

First

What is the name you go by and your preferred pronouns? If applicable, write N/A otherwise:

Signature

Date

Note: I will be using your ID number to upload the grades so that you can see them. This implies you must keep in mind your ID number.