

Instructor: Dr. Fred Omega Garces

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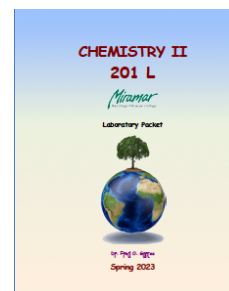
WebPage <http://fogarces.com/>

Office Hours MW: 2:30- 3:30p, T: 7-8:30p, Th 3:00 – 4:00p and by Appointment

Lab Manual Download the lab manual via [Canvas](#), [website](#), or [Google drive](#)

Supplies Scientific Calculator, Cotton Lab coats, Nitrile gloves, Safety goggles, Composition Notebook (B&W)

Availability Lab manual available online from [Mira Mesa Copy Center](#) for \$23.80 (858) 578-0941



Although studying the theoretical aspects of chemistry can be challenging, it can be rewarding if you discover that it is a hands-on science, and the theoretical concepts can explain the physical experiments. The laboratory experience and observation of chemistry provide the backdrop of newly learned knowledge and some "Eureka" moments. Experiments in this course will be closely tied to topics covered in the lecture at Miramar College. If you are taking a class at another college, you must ensure you are current with the topics covered in this lab. If you complete this course, you are expected to become familiar with the physical characterization of systems at equilibrium, be able to determine kinetic rate laws, understand properties of acids and bases, apply the laws of Thermodynamics, be able to prepare and analyze metal complexes, and develop standard reduction potential for a series of elements. In addition, students are expected to communicate their experimental results properly by submitting thorough lab reports.

Student Learning Outcome:

Specifically: Upon completing Chemistry 201L, upon successful completion of Chemistry 201L, students will be able to write a properly formatted lab report and design and complete research experiments to accurately answer a quantitative question.

Course Description: This is the second semester laboratory course of a two-course sequence in general chemistry. It is intended for students majoring in science or satisfying prerequisites for professional schools. The lab work will concentrate on the principles and laws of chemical behavior of matter, emphasizing a quantitative, mathematical problem-solving approach. **Topics include chemical equilibrium, additional acid-base theory, kinetics, nuclear chemistry, thermodynamics, electrochemistry, oxidation-reduction reactions, coordination chemistry, and qualitative analysis.** The six lab hours will also include recitation problem-solving sessions, known as "Activities" or "Dry Labs".

Prerequisite: You must have had first semester general chemistry, i.e., Chem 200/200L with a grade of "C" or better.

Corequisite: This is the second semester laboratory course of a two-course sequence in general chemistry. It is intended for students majoring in science or satisfying prerequisites for professional schools. The lab work will concentrate on the principles and laws of chemical behavior of matter, emphasizing a quantitative, mathematical problem-solving approach. **Topics include chemical equilibrium, additional acid-base theory, kinetics, nuclear chemistry, thermodynamics, electrochemistry, oxidation-reduction reactions, coordination chemistry, and qualitative analysis.** The six lab hours will also include recitation problem-solving sessions, known as "Activities" or "Dry Labs".

Transfer Information:

UC Transfer Course List. Associate Degree Credit and transfer to CSU and/or private colleges and universities.

Attendance

- It is the student's responsibility to drop all classes in which he/she is no longer participating.
- It is the instructor's discretion to withdraw a student after the add/drop deadline due to excessive absences/participation.
- Students who remain enrolled in a class beyond the published withdrawal deadline, as stated in the class schedule, will receive an evaluative letter grade in this class.

See below for more information.

Tentative Schedule*

General Chemistry II

Chem-201 Lab

CRN 53982

Spring 2024

Week of:	Mon/Tue	Wed/Thr
1	29-Jan SQ1: Safety Policy (Safety Quiz 25 pts) SQ2: Syllabus Quiz 50 pts (Given in Canvas)	Using CURE to address Climate Change (10 pts)
2	5-Feb Check-in Activity -1: Some Chem 201 Fundamentals: Conc & Excel (20 pts)	Writing a Research Proposal Writing lab report: Getting to Know Vernier a practice writeup
3	12-Feb Activity - 2: Getting to Know Vernier & Dept Instruments (30 pts) Part 1 & 2	Activity - 2: Getting to Know Vernier & Dept Instruments Part 3
4	19- Feb President's Day	E-1a*: Rate Law, Crystal Violet. (75pts)
5	26- Feb E-1b*: Rate Law, Crystal Violet. (75pts)	Data Analysis and Writing up Experiment #1 Submitting "The Proposal" (First Draft) and setting up the Team
6	4-Mar Activity -3: Equilibrium and LeChatelier's Principle (20 pts)	E-2: Chemical Equilibrium, finding K_f . (75pts) Data Analysis and Writing up Experiment #2
7	11-Mar Submitting "The Proposal" & Budget Proposal	E-3a: Acid Dissociation Constant, K_a . Part 1 (100 pts)
8	18-Mar E-3a: Acid Dissociation Constant, K_a . Part 2 (100 pts)	E-3, Part 3: Acid Dissociation Constant, K_a . Part 3a (100 pts)
9	25-Mar Spring Break	
10	01-Apr E-3, Part 3: Acid Dissociation Constant, K_a . Part 3b (100 pts)	Data Analysis and Writing up Experiment # 3 Activity-4: Weak Acid and Base Chemistry (20 pts)
11	08-Apr E-4:b Analysis three Nickel Salts (150 pts)	E-4c: Analysis three Nickel Salts
12	15-Apr E-4c: Analysis three Nickel Salts	Data Analysis and Writing up Experiment # 4
13	22-Apr Activity -5: Thermodynamics (20 pts)	Lab Assessment Exam
14	29-Apr Research on Project	Research on Project
15	06-May Research on Project	Research on Project
16	13-May Research on Project Write-up and Preparation	Presentation
17	20-May Check out and Review	ACS Final Exam for Chem 201 Lecture section

Important Dates:

Feb 09– Last date to drop with no "W" in transcript.

Mar25 to Mar 31 – Spring Break

May 24 – End of semester

Feb 16 & 19 – President's Day, No Classes

April 12 – Last date to withdraw from classes with a "W".

‡ Generally, late assignments will not be accepted. **If there are extenuating circumstances & you are given permission to turn in the assignment, the highest grade you can earn is the lowest score of those students who did turn in their assignments on time.**

For numerical problems, make sure the answer is accompanied by a complete step-by-step solution that clearly shows how the answer was obtained. Always box your final answer and remember that neatness is essential.

To ensure maximum credit for your work, write your name on all pages and make sure it is clear and legible. When you take a photo or scan your work, make sure it is in focus and with high resolution. You must convert your doc to a pdf file upon uploading. When converting to a pdf file, ensure the conversion is complete; otherwise, your file will have zero content.

When saving our file, name your file with the format Lastnamefirstinitial_AssignmentTitle_Date. For example, GarcesF_Act01ConcConversion_Mar15. The file should not exceed 50 MB. Compress (zip) the file if necessary.

GRADING & EVALUATION

Each assignment not submitted by the [until deadline](#) is counted as an absence. In other words, turn in your work, even if it is not completed. If you are having difficulties completing assignments, please talk to your instructor. We might be able to work out a makeup. If you miss four assignments without informing your instructor about your circumstance, you will be dropped for non-participation in this course. **To maximize points for a lab, please complete all lab work and submit it by 11:59 PM of the due date.** Remember that time management is part of your lab technique grade.

Final grades will be posted no later than a week after the end of the semester.

PLEASE NOTE! It is essential to **communicate** with your instructor if you are absent. If your absence is for professional or reasonable personal reasons, inform your instructor as soon as possible. Have someone contact your instructor about the details of an emergency or life-threatening illness. It is possible to arrange a makeup lab or partial credit for the discussion calculation section using the results provided by your instructor. For dry labs, if you miss an activity assignment, that will be the assignment that is dropped without penalty.

Tentative points distribution.

1. Safety, Syllabus. There is a safety quiz (25 pts) and a syllabus quiz (50 pts). If the safety quiz is not taken then each lab, is assess 25% penalty until the safety quiz is taken. **(Total: 75 pts)**
2. Lab Assessment Exam, Exam on Experiments and Activities **(Total: 75 pts)**
3. Lab Conduct / Techniques / Attendance, you will also be graded based on your time management in class, attendance laboratory report clarity, electronic lab notebook upkeep, and lab/workspace cleanup. **(Total: 75 pts)**
4. Activities: Cumulatively, the lab activities (dry labs) are worth 110 pts. Activity 2, Getting to Know Vernier, is a mandatory assignment and is worth 30 pts. Due dates are shown on the schedule but are subject to change. Activities are generally completed in the worksheet and uploaded in Canvas. Extra pages should be written on white printer paper and converted to a pdf doc before uploading. The answers to the questions in the activities must be entered in Canvas. Lowest activity is dropped when calculating total points. **(Total: 110pts)**
5. Experiments: There are four experiments scheduled (excluding your project). The first two experiments are worth 75 pts, and the acid-base experiment is worth 100 pts with a 10-pts unknown. Experiment 4, the Nickel synthesis, and analysis lab, is worth 150 pts. There is a makeup experiment. The first experimental write up can be re-written but can only improve you first write-up by a 15%. **(Total: 400 pts)**
5. Unknowns: Unknown for Activity 2 and Expt 3 **(Total: 15 pts)**
6. Original Research. The CUREs portion of the course is broken down into sections. Intro (10), Library (10), Proposal 1st Draft (10), Proposal (30), Budget (25), Research (40), Results (40), Poster (40), Presentation (25), Peer Review (20) **(Total: 250 pts)**

Course Grade: Course grade will be determined as outlined below. Evidence of following directions, meeting deadlines, and showing improvement during the semester will be considered when assigning final grades.

Grade	Safety, Syllabus & MidTerm Quiz	100	Points	Accomplishment Level	Grade
Eval-:	Lab Techniques & Conduct	50	90- 100 %	Superior/Excellent	A
(100 %)	Five Activities	90	80-89 %	Proficient/Good	B
	Four Expt. with write-up	400	65 - 79 %	Acceptable	C
	<u>Original Research CUREs Project</u>	<u>275</u>	58 - 64 %	Poor	D
	<i>Final Points</i>	<i>1000pts</i>	Below 60	Unacceptable	F

If your average for this course drops below 30%, you may be dropped from the course. Do not plagiarize your report from other students. Please adhere to the academic honesty policy. You will receive a zero for the lab if you violate the honesty policy. In addition, you might also fail the course. Please read the honesty policy at the end of this syllabus.

Student Learning Outcome (in case you missed it the first time)

Although studying the theoretical aspects of chemistry can be challenging, it can be rewarding if you enjoy the hands-on part of mixing chemicals and discovering how the physical phenomena can be explained by the theoretical framework of the reactions. Throughout history, the laboratory experience provides the backdrop of many newly found knowledge and some "Eureka" moments. Therefore, experiments in this course will be closely tied to the theoretical discussions from lecture. This course, albeit the corequisite to the lecture, may not follow the topic sequence in your class. Each student is responsible for planning time and becoming familiar with the topics covered in the lab. Topics covered in this course include the characterization of a system in equilibrium, kinetics of chemical reactions and their rate laws, properties of acids-base and titration analysis, application of the Laws of Thermodynamics, determining reduction potential for electron transfer process, and the synthesis and analysis of metal complexes. In addition, students are expected to communicate their experimental results properly by submitting scientific lab reports.

Specifically: Upon completing Chemistry 201L, students can perform high-level laboratory experiments using Vernier/LoggerPro, the computer interface software/hardware. Students should be able to collect pertinent data and analyze/interpret the results. This will require performing the necessary calculation and then formulating valid conclusions. These skills will be evaluated by the student's experimental report for each experiment.

COURSE OBJECTIVES

1. Apply key principles and calculations of chemical kinetics to analyze data collected in a chemical kinetics experiment.
2. Perform experiments related to chemical equilibrium in which students perform calculations and apply concepts related to this topic.
3. Perform acid-base experiments in which students perform calculations and apply key concepts of acid-base theory.
4. Utilize pertinent equations and apply concepts to the analysis of data collected in an experiment related to thermochemistry.
5. Perform an experiment related to electrochemistry and apply equations and concepts of electrochemistry to analyze data.
6. Synthesize and analyze a coordination compound.
7. Utilize computer technology to generate, organize and/or analyze data.
8. Utilize current laboratory equipment such as a pH meter, voltmeter, and spectrophotometer.
9. Write formal laboratory reports
10. Collect data in an organized fashion, such as in a laboratory electronic notebook.
11. Collect, organize, analyze, interpret, and present data.

Important Policy Notes

1. Safety & Sustainability

1a. Personal Safety in lab. **Your and your classmates' safety is paramount while in the laboratory!** Safety regulations must always be observed as it takes only one accident to cause blindness or serious permanent injury! The first-class meeting will cover the safety policy in this course. If you are not present during the first-class period when this is discussed, you will not be able to add the course until you demonstrate to the instructor that you understand and comprehend all safety rules and regulations.

You are always responsible for maintaining safe practices in the laboratory! This means following ALL SAFETY RULES, wearing eye protection and proper clothing and shoes, and conducting experiments strictly according to the lab manual. At any time during the laboratory period, the instructor has the right to dismiss you for violating safety regulations. If you are dismissed, you will not receive credit for that laboratory session and will not be entitled to a make-up session. In addition, during any laboratory session, if your instructor gives you a warning regarding a safety violation, any additional violations of that type during the remaining laboratory period will result in a 5-point penalty per violation on that day's laboratory experiment.

Some important policies that will be strictly enforced are the dress code (wear PSE/PPE when experiments are being conducted), and NO eating or drinking in lab! In addition, all materials in contact with chemicals are disposed of in the correct waste bin. There is a bin for regular trash (dark green), recycle (blue) and materials contaminated with chemical (yellow). There is also a hood designated for chemical waste. All solid and liquid chemicals are disposed of in this waste container.

The main difference between violating a safety rule and poor lab techniques is that the former jeopardizes oneself or others, the latter reflects on the accuracy of the experimental results and ultimately the lab grade. Therefore, review the safety rules for this course since that is an integral part of the syllabus.

1b Recycling and Sustainability. Miramar College is committed to sustainability on campus and in our classrooms, as reflected in the SDCCD Sustainability Proclamation. To minimize the use of paper resources, please consider when a document may be shared digitally rather than printed. When a document must be printed, decrease the default setting on your margins to at least 0.8" and print on both sides of the paper. Please utilize the campus and classroom recycle bins for all recyclable materials: plastic bottles and containers (#1-7), cans, paper, and cardboard. You should bring reusable drink containers to school rather than disposable plastic bottles. Thank you for considering your role in keeping the campus environment clean, and conserving resources in your academic life.

2. Preparation, time-management, and work in class

2a. Lab time is to complete assignment schedule for that day. Please read the schedule for the semester now and then a week before a scheduled assignment (activity / experiment) so you are prepared. If it is an experiment, come prepared by reading it ahead of time and wearing proper clothing, including PPE. Completed the prelab and have your data table ready before starting an experiment. Be actively engaged in the lab experience. All lab work for the day must be completed by 15 minutes before the scheduled end of class period 9:35 PM (lab ends at 9:50 PM). Your lab technique score will be affected if you are still in the lab when the clock strikes the end of class, 9:50 PM. Manage your time so you complete what you plan to do within the allocated time. Keep in mind that the final lab report must be complete before 11:59 PM of due date.

2b Working with others. The second semester lab is based on students working independently and being responsible for their work. Generally, there are no exchange of data or work. Using data other than the one you generate (without instructor permission), this will be considered a violation of academic misconduct. **Credit will not be given for any individual assignments containing responses that are identical or very similar to those of another student. This will be considered plagiarism or cheating, and the student could be subject to failing the course.** Plagiarism and cheating will not be tolerated. There is zero tolerance for academic dishonesty in this course. If you engage in either of these activities on any assignment (quizzes, lab assignments, etc.), you will receive **no credit** for the assignment, be dismissed from the course, receive a failing grade, and be referred to the Dean of Students for disciplinary action. For further information, please read the Miramar College catalog under the section on "Student Rights, Responsibilities of all San Diego Community College District students", under 3.0 Code of Conduct. See Honesty policy below.

2c. Lab Etiquette. Proper lab attire is required for EVERY lab meeting (even the first day and dry lab days). Proper lab attire includes closed-toed shoes that enclose the entire foot, pants that go down to the ankles and cover the entire leg, and shirts that cover shoulders and midriff. Everyone must wear full splash goggles and a 100% cotton lab coat with snap or cloth knot buttons on experiment days. Nitrile gloves must be worn when handling harmful chemicals and when washing glassware. While in the classroom, phones must be stored in a bag or drawer. Texting and phone calls should be made outside the classroom. While in the classroom, phones should be stored in a bag or a drawer.

2d Electronic notebook upkeep. Please document all laboratory work in Canvas. (Do not use notebook paper). See guidelines in lab notebook write-up. You could lose up to 25% by not keeping to this format. You are encouraged to bring your computer laptop to class. The [LoggerPro](#) software is a free download via Miramar College

2e. Calculator policy. By the second-class meeting you must have a calculator with the following function: scientific notation, base 10 and natural logarithms, and powers or roots (e.g., y^x or $n\sqrt{y}$). If you need help in determining whether your calculator contains these functions or in using any of your calculator's function, please see your instructor immediately. **It will be your responsibility to understand the use of your calculator and its functions.** Please bring your calculator to each class meeting. Smart devices such as smart phones or iPad/tablets are generally not allowed to be used as calculators. In some instances, computers will need to be used to complete a spreadsheet. If you bring your computer for such exercises during an assessment, you will not be allowed to use the internet.

2f Show your work! For all assignments, i.e., **Laboratory assignments**, homework, quizzes, and exams: **No credit** will be given for any numerical problem unless they are accompanied by a complete step-by-step solution, which clearly shows how the answer was obtained. Activity work, paper quizzes and exam must be used when submitting work. Show answers and work if room is permitted in the worksheet. If extra sheets of paper are needed to show work, use white printer paper. Final answer in a problem (activity, quiz, or exam) that requires work to be shown, should have the final answer box. If your work cannot be clearly followed, **you may not be given credit for that problem.** Please do not use pen for calculations. **Write your name on all sheets of paper you turn in.**

3. Absence Policy

3a. Class attendance. The State of California mandates attendance in this class. In other words, students could be dropped from this course if more than 3 lab meetings, excused or unexcused, before the withdrawal deadline. Missing more than 5 class meetings in the semester, can also result in the final grade being lowered one letter grade. You will be mark absent if you do not stay at least through 60 % of the class duration, that means if you leave before **8:30 PM** (for a class that goes from 6:40 to 9:50pm), you will be mark absent. After the first absence, there is a 5-point deduction in your lab technique score. If you have a valid excuse, it is only 2 pts. After that, the deductions are 10 pts (or 4 pts with an excuse), 20 pts (or 8 pts with an excuse), and so on.

3b. Repeatability. The state government heavily subsidizes student education at the California community colleges. As such, the state has limits on the number of times it will fund a student to re-enroll in the same course. This limit changes every year depending on economic conditions. Therefore, if this is your second time taking this course, and you do not pass or drop with a "W," you will be required to petition to take the course a third time. In the present economic climate, these petitions are usually denied. Therefore, if this is your second attempt in this course, be sure you are fully committed to passing.

4. Course Assessments and Honesty Policy

4a Preparation for quizzes & exams you must bring a calculator. Bring your calculator since sharing of calculators during a quiz or exam is discouraged. Each assignment will require your signature via the honesty policy disclosure statement. Your signature is an agreement between you and your instructor indicating that you agree that you are practicing the honesty policy for the course.

After completing an assessment (quiz or activity), please do not email me about your score until after the due date and after I have had time to review your answers. If you receive a score of less than the assigned values for your work, it is because the score you receive is a place holder until I have had time to go over your assessment. Canvas is an AI system and cannot grade free response questions because the answers need to be pre-programmed. Upon reviewing your point totals or comments after the score has been released, you have two weeks to contest the score otherwise the score stand as is.

For some assignments, you can do multiple submission. However, only the latest submission will count if you update your assignment because you forgot to include something or just want to improve your work. So, if you modify your work, answer all the questions again to avoid getting a lower score than a previous submission.

4b. Policies during an exam. Seating chart and preparation for midterm and final exams. When a midterm or final exam is to be given, you will be asked to remove all necessary material from your backpack/purse such as Scantron, calculator, pencil, lab notebook (if allowed), etc., and place these items at your lab station. In addition, you must turn off your cell phone (or place in silent mode), place other personal items back in your backpack/purse and place your backpack at the front of the room, under the white board. You should retrieve your personal belongings after the exam. A seating chart may be posted for any quiz or exam. If you are not seated in your assigned seat, then you will be asked to comply, if you refuse you may be dismissed from the class, and **you will not be allowed to take the quiz or exam**. If you need to use the bathroom, come up to the instructor station, turn in all material and your instructor will excuse you. You can collect your assessment material and continue the exam when you return. In general, when you have turned in your exam and no other work is scheduled, you may leave.

5. Administrative Issues and Professional Conduct

5a. Dropping course. If you drop this course, it is your responsibility to go to the registration office so you can file the proper paperwork to withdraw from the course. Simply not completing assignments or participating in the online activities does not constitute dropping the course. At the same time completing assignments does not constitute that you will pass this course. Completing all assignments and performing all courses work at the 65 percentiles, or better will ensure a grade of C or better for the course. However, not completing any of the assignments will guarantee a failing grade for this course.

5b. Communication such as eMail, Office hours and voice mail: If you need to contact your instructor, please use the email app. You can also use fgarces.ch201@gmail.com or voice mail (619-388-7493) if necessary. In your message, be sure you include name, your email address, the course you are enrolled in (Chem201), and the CRN of the course. Too often the email address that is receive provides no information of student's identity. Many are of the flowery email address type, i.e., PowerKid96@yahoo.com. If the sender cannot be identified, then there are no guarantees that the message will be answered. If using voicemail, state clearly important information such as the course title, CRN, your name, and the return number. Leave a detail message stating the nature of the call. When planning to visit S6-112F, it is always a good idea to call ahead to ensure someone is there.

5c. Conflict. You are encouraged to talk to your instructor if a problem arises. Resolution can generally be resolved by direct communication. If the conflict cannot be resolved, the next step is to bring the issue to the department chair. If this doesn't work, we will seek counsel from the dean. The Vice President of Instruction will get involved if it is still not resolved.

5d. Academic Misconduct and Cheating. **In this course you are encouraged to study and prepare for quizzes and examinations with other students. However, you must work alone when taking quizzes and exams, completing activities, and writing laboratory reports. The College regulations are very explicit about academic misconduct and cheating and these regulations will be fully enforced. During examinations, we will apply a code of honor, under which you are to work alone and neither give nor receive help from any source. Also, you are expected to help enforce this code of honor.**

•**Behavior:** You are responsible for behaving maturely in lab or online via zoom. There are [net-etiquette](#) website that gives you information on conduct over the Internet. One useful site is [Netiquette](#) Home Page. Any behavior, which interferes with the legitimate instructional, administrative, or service functions of the class, is considered disruptive behavior. You will be asked to meet with me or the Dean if you display disruptive behavior. Please respect your classmates and your instructor.

•**Plagiarism:** Cheating, coping or plagiarizing work in this course (homework, quizzes, lab assignments. etc.) will result in a zero score for the assignment, and/or dismissal from the course. Depending on how the issue is resolved with the Dean of Students a failing grade for the course will be given as well as other for disciplinary action. *If you have identical work (or mistakes most likely), you will automatically receive a zero for plagiarizing and you will be asked to explain why your work is identical to another. If your explanation isn't sufficient, you will be referred to the Chair and the Dean.* For further information, please read the Miramar College catalog under the section on "Student Rights,

Responsibilities of all San Diego Community College District students") Special software is available to the faculty at Miramar College to check if a paper is plagiarized from the literature or the web.

6 Conditions for being Dropped

- Missed Safety quiz and/or Syllabus quiz.
- Average drops below 30% of total to date.
- Missing more than 3 class meetings before the withdrawal deadline.
- Disruptive, dishonesty or behavior in course that is detrimental to self, neighbors, and instructor.

7 Special Student Services

- **Tutoring:** Free tutoring will be available at the ASC (Academic Success Center). The ASC is a peer-to-peer tutorial center supervised by credential instructor. The emphasis is on reading, writing, study skills, problem solving and math across the curriculum. Content tutoring is also available. If you would like more information on the service provided, see your instructor, or stop by the ASC. (Not open during summer and inter-sessions). In addition, you may also have a tutor assigned to this course. If that is the case, you will receive a message from that tutor.

- **Disability Support Program & Services (DSPS):** Students with learning or physical disabilities should contact the instructor and the DSPS (**Disability Support Program** Programs and Services) to arrange for special classroom or exam accommodations. DSPS is in building K-204 and can be reached at (619) 388-7312.

- **Miramar College Chemistry Affiliation (ACS Chapter):** Join the Chem affiliates for exciting experiences related to science and to meet other people who share an interest in science. The science club also sponsors the recycling program on campus. Open to all Miramar students, faculty, and staff. (Not open during summer and inter-sessions)

- **STEM Center** (S6-110) offers free tutoring in Chemistry, Physics, and Biology*, as well as a place to relax and do homework. For current hours, visit sdmiramar.edu/mesa.

*Anatomy tutoring is held in the Academic Success Center (sdmiramar.edu/services/asc).

- **The MESA Center** (Mathematics, Engineering, Science Achievement) Program is an academic and student support program for economically and educationally marginalized STEM students in calculus-based STEM majors. Find out more by visiting sdmiramar.edu/mesa.

Famous last words- From Ask Quora

<https://www.quora.com/What-do-you-do-when-you-feel-that-a-professor-has-given-you-a-much-lower-grade-than-you-deserve>

[Igor Markov](#), EECS Professor at Michigan - currently at Google

This situation is not rare, so you are right that some instructions could be useful. Students often assume that effort itself is rewarded, whereas university courses (unlike high school courses) increasingly reward skills and knowledge. Freshman courses may include many routine assignments, but the most advanced courses value insight beyond anything else. This comes as a shock for students with poor study habits.

Students who ended up disappointed by their grades often spend time on things that aren't useful. For example, when given a medium-difficulty practice assignment, some students try to "research the Web" to find a solution, not to come up with a solution. This can take time and often succeeds but is a wrong approach because it does not teach problem-solving and will almost guarantee failure on the exam (such students expect that on the exam they will be given one of those problems for which they know solutions).

So, what should you do? - Ask for an appointment with the instructor and do two things.

- Go over your course performance by component (homework, exams, projects, etc...) to understand what your main weaknesses are. Keep in eye on possible clerical errors, but such errors rarely affect the letter grade.
- Describe how you structured your efforts in this course and ask the professor for suggestions on how to study more effectively.

Reasoning about "the grade that I deserve" is often questionable, as people often overestimate their abilities and blame others for their mistakes. This is not the case with everyone, but a good enough reason for professors to neglect student's claims of deserving better grades - rather than decide which students are reasonable and which are ridiculous, it's more consistent to look at documented performance.

Keep in mind that some students end up repeating the same courses several times before they learn the necessary skills.

[5 Most Effective Techniques for Learning Without Memorizing](#), [Maya Kacharava](#)

Learning is a perplexed and consequential process. If you are involved in many various activities, your brain generates peculiar details of the given information. We, therefore, can state that your capacity is sophisticated with an accumulation of knowledge.

When you are trying to remember the text, the cerebrum cannot keep up the huge amount of information. Moreover, memorizing activity is an intense mental activity. Sometimes a person can even deal with the problem of forgetting the plain text forms.

In this case, we can facilitate mental work by connecting similar ideas and associations. You can easily make logical chains from things you already know. The psychologists and neuroscientists assert that this is the passive form of perception. The passive learning can be both entertaining and intellectually productive. The main advantage is that you can combine natural aspects of things (how it sounds and how it looks like) and your representation. Here are the most effective techniques that you can use for learning material without memorizing:

1) Visualization process. Usually, it uses the power of your imagination. The new concept can be reached by creating visual forms. For example, you can connect abstract ideas and forms into one mental picture. This means that one episode from your experience may appear in a completely new image. For students who do not use the visual system for memorizing, this strategy can be achieved by auditory or somatosensory perception. For example, sound, taste, or smell image creates a particular concept.

2) Simplifying technique. This method for learning without memorizing is one of the most effective. It is based on explaining the concept using the simplified lexicon. You can imagine the situation when you are supposed to describe or explain the idea to children or pupils. It usually helps to underline the concrete facts rather than abstract information.

3) Metaphorical images. Metaphors are great instruments for the memorizing process. The key point is that you can combine the already known text forms with completely new images. It can help you to accept and analyze the new information more quickly. For example, if we are talking about global political issues, we can correlate it with the experience from your social activity.

4) Graphic images. Creating different kinds of diagrams, schemes, and tables is a productive way of establishing connections between various things. Moreover, this type of memorizing technique develops your vision on the text material because you make logical operations during the information systematization. For example, when you are studying American history outline, you can create a table based on a timeline, political/social life, etc. Such a graphic image will show the differences and similarities between the periods.

5) Group learning. This method works as a kind of brainstorming. It appears when several people share their opinions or explanations regarding a specific topic. The members of a group can make connections between the same facts and remember the subject itself.

HONEST ACADEMIC CONDUCT

San Diego Community College District

This policy is in accordance with District Procedures 3100.

Honesty and integrity are integral components of the academic process. Students are expected to be always honest and ethical in their pursuit of academic goals.

1.0 DEFINITIONS:

Cheating: The act of obtaining or attempting to obtain credit for academic work using any dishonest, deceptive, or fraudulent means. Examples of cheating include, but are not limited to:

1. Copying, in part or in whole, from another's test or other examination;
2. Discussing answers or ideas relating to the answers on a test or other examination without the permission of the instructor;
3. Obtaining copies of a test, an examination, or other course material without the permission of the instructor;
4. Using notes, "cheat sheet" or other devices considered inappropriate under the prescribed testing condition;
5. Collaborating with another or others in work to be presented without the permission of the instructor;
6. Falsifying records, laboratory work, or other course data;
7. Submitting work previously presented in another course, if contrary to the rules of the course;
8. Altering or interfering with grading procedures;
9. Plagiarizing, as defined herein;
10. Knowingly and intentionally assisting another student in any of the above.

Plagiarism: The act of incorporating ideas, words, or specific substance of another, whether purchased, borrowed, or otherwise obtained, and submitting the same as one's own work to fulfill academic requirements without giving credit to the appropriate source. Examples of plagiarism include but are not limited to the following:

1. Submitting work, either in part or in whole, completed by another;
2. Omitting footnotes for ideas, statements, facts, or conclusions, which belong to another;
3. Omitting quotation marks when quoting directly from another, whether it is a paragraph, sentence, or part thereof;
4. Close and lengthy paraphrasing of the writing or work of another, with or without acknowledgment;
5. Submitting artistic works, such as musical compositions, photographs, paintings, drawings, and sculpting, of another;
6. And submitting papers purchased from research companies (or downloaded from electronic source) as one's own work.

2.0 ACADEMIC AND ADMINISTRATIVE SANCTIONS

- Cheating and plagiarism may warrant two separate and distinct courses of disciplinary action which may be applied concurrently in response to a violation of this policy.
- Academic Sanctions, such as grade modifications, are concerned with the student's grades and are the sole responsibility of the faculty member involved.
- Administrative Sanctions, includes any disciplinary action up to and including expulsion, and are the responsibility of the College president or designated representative.

2.1 ACADEMIC SANCTIONS

When a student is accused of cheating or plagiarism, it is recommended that the faculty member arrange an informal office conference with the student and the department chair, or designee, to advise the student of the allegation as well as the evidence, which supports it. The purpose of the informal conference is to bring together the persons involved so that the situation might be discussed informally, and an appropriate solution might be decided upon. If more than one student is involved in the incident, the faculty member may call the students together to confer as a group at the discretion of the faculty member. All notes and discussion between the student and faculty member are confidential, in accordance with the Family Rights and Privacy Act, and may be used as evidence in subsequent campus disciplinary proceedings or any subsequent legal action.

Guidelines:

It is the faculty member's responsibility to determine the type of academic sanction, if any. In reaching the decision, the faculty member may use the following guidelines:

1. The faculty member should advise the student of the alleged violation and should have reasonable evidence to sustain that allegation. Reasonable evidence, such as documentary evidence or personal observation or both, is necessary if the allegation is to be upheld.
2. The usual sanction is "grade modification." This sanction is to be used only if the faculty member is satisfied that cheating or plagiarism did, in fact, occur.
3. The "grade modification" is left to the discretion of the instructor and may include a zero or F on the paper, project or examination, a reduction in one letter grade (e.g., C to D in the course), or an F in the course.
4. In addition to grade modification, certain instructional departments/programs may have policies, which state that cheating can show unsuitability for continuation in the program and/or profession.
5. In all cases, faculty should make the student aware of the penalties for cheating or plagiarism and of their appeal rights. It is recommended that a statement be included in the course syllabus.

If an academic sanction is imposed, the incident must be reported in writing within ten instructional days to the School Dean who shall send a copy of the report to the Disciplinary Officer. Notice to the Disciplinary Officer will ensure that there is documentation of the incident with the college in the event of a challenge or legal action.

2.2 ADMINISTRATIVE SANCTIONS

The School Dean will consult with the Disciplinary Officer as to whether the matter warrants administrative sanction in accordance with 3100.2. All actions related to discipline under Policy 3100.2 are the responsibility of the Disciplinary Officer.

1. In the memorandum to the School Dean, the faculty member should state what the nature of the offense was, the evidence, and the academic sanction imposed.
2. The memorandum will be retained on file with the Disciplinary Officer.
3. The Disciplinary Officer will notify the faculty member if an administrative sanction will be pursued.

Collaboration versus Dishonesty

What is the difference between working collaboratively versus committing academic misconduct? Students can begin to answer this by asking themselves the following questions:

Is this assignment meant to evaluate my own individual knowledge and skills?

If yes, then it must be your own work. It is also best to assume that all coursework is individual, unless explicitly labelled as group-work by the faculty member.

Am I working with others on general skills, or on a specific assignment?

Working together to solve problems, explore challenging ideas or learn new skills are examples of collaboration.

Pooling effort on a piece of coursework which has not be explicitly labelled as group work is an example academic dishonesty.

The chart below displays the differences between Collaboration and Academic Dishonesty*.

Collaboration	Academic Dishonesty
Revising with friends and quizzing each other on course material	Sitting for an online exam together (including using instant messaging to discuss the exam while it is ongoing)
Discussing an assignment briefly with friends	Sharing draft assignments with friends and copying words/ideas/structure from each other
Working on a group project together, spreading the work equally around the group	Deciding the “smartest” person in the group should do all the work so everyone gets the best grade
Asking your friend to help you improve your skills with an element of essay writing (structure, referencing, etc...)	Asking your friend to edit your essay for you
Discussing course concepts and building on each other’s ideas	Planning specific exam answers
Directing your friend to resources to improve their academic skills (see academic skills centre)	Writing your friend's assignment or sitting for their exam for them
Mentioning a helpful source to a friend	Sending your full bibliography to a friend
Sharing work with members of your group on a collaborative project	Sharing your group's work with friends in another group
Finding sources online and citing them correctly in your essay	Buying an essay from a website
Each study group member revising one section of a module and teaching the others	Each group member prepping an exam answer for everyone to copy

*This chart was developed by Dr. Rachel Horrocks-Birss, Academic Skills Centre, University of Dundee