Chemistry 3AL Syllabus

General Chemistry 3A Lab – Section 5109

Santa Rosa Junior College, Spring 2021

Instructor: Osman F. Güner, PhD

Email: oguner@santarosa.edu

Class: On-line

Class Hours: Thursday, 8:00 am – 9:00 am

Laboratory: Bech 1980

Lab Hours: Thursday, 9:00 am – 12:00 pm

Office: On-line

Office Hours: Thursday, 7:30 am – 8:00 am; 1:00 pm – 3:00 pm

Friday, 7:30 am – 8:00 am

Course Information:

General principles of chemistry, including atomic theory, bonding, stoichiometry, kinetic molecular theory of gases, properties of mixtures, the periodic table, and thermochemistry. Emphasis will be placed in laboratory experiments that illustrate the fundamental principles and laws of chemical behavior and the properties of matter. Lab portion of the first semester of a one-year program of general chemistry.

Student Learning Outcomes:

Upon completion of the course, students will be able to:

1. Demonstrate proficiency in fundamental chemistry laboratory techniques.
2. Carry out experiments safely and carefully in the lab.
3. Obtain accurate data and interpret and manipulate the data correctly.
4. Relate experimental observation in the lab to theoretical chemical concepts from the lecture.

Student Objectives:

During this course, students will:

1. Prepare for and conduct experiments, safely and correctly, and clean up and dispose of waste.
2. Perform synthesis, characterization, and determination of yield.
3. Experimentally verify known physical quantities.
4. Identify and perform quantitative analysis on mixtures.
5. Measure physical and chemical properties,
6. Generate calibration curves and use them with an appropriate level of precision.
7. Use scientific writing and format to clearly communicate results of experiments.

General Course Policies:

Prerequisites: Course Completion or Current Enrollment in CHEM 3A

Recommended: Course Completion of ENGL 1ACourse Completion of ENGL 1A

Transfer Credit: CSU; UC.

Repeatability: Two Repeats if Grade was D, F, NC, or NP:

1. Attendance

   Attendance is critical for this course. Progressive nature of the material requires a thorough understanding of the previous material in order understand and build upon the next one. There will not be any make-ups on labs or exams (without a documented medical excuse). Missing more than three labs will result with an automatic failure.

2. Standards of Conduct

   All work submitted for grading must be the students own work. In lab, you must make your own observations and report using your own words. Collaboration is encouraged, but final work submitted must be your own. Students who plagiarize or cheat may be suspended [for one or two class meetings by the instructor] and referred to the Vice President of Student Services for discipline sanction, in cases of egregious violation.

   Cellular phones must be silenced during lectures. Texting is not allowed. In case of an emergency that requires you to send a text message or a phone call, you should step outside to do so.

3. Laboratory

   There will be 12 lab sessions. Lab notebook is required, for the in-person experiments, to write down the objective, experimental procedure, observations, and results. **The lab reports and any pre-lab or post-lab questions, if applicable, are due a week from the completion of the experiment**. Failure to deliver lab report at the end of the session or missing a lab will result with a zero grade for that session. Late reports (no longer than 5 days late) will be marked down by 20% of the actual grade. Missing more than three labs will result with an “F” grade for the entire course. There will be 12 lab-reports 40 points each, yielding a total point of 480 (i.e., 48% of the final grade).

4. Homework

Following the completion of each experiment, a homework assignment will be due before the next lab session. The homework will be posted in Canvas, submitted by the students on-line, and will be automatically graded. Each homework will be 10 points worth and there will be 12 homework assignments, yielding a total grade of 120 points (i.e., 12% of the final grade). Missing the deadline for homework will result with an automatic zero grade.

5. Lab Notebook

   Upon completion of the five in-person labs, lab notebooks will be inspected and graded by the instructor before departing the lab. The pictures of the completed lab notebook pages, if requested, will be provided to the instructor via email for grading within 24 hours. Each lab notebook will be 10 points, for a total of 50 points (5% of the final grade).

6. Exams

   There will be no midterm exams and one final lab exam. The final exam will be cumulative with emphasis on the concepts discussed during the pre-lab lectures, homework assignments, lab reports, and laboratory techniques. It will be conducted on-line, and date of the exam is May 20th, 8:00 am – 10:30 am. No make-up exams will be given. Missing an exam will result with a zero grade. A medical excuse will be granted only if proper documentation from a doctor is provided. The final exam will be worth 350 points and will constitute 35% of the final grade.

7. Emergency Evacuation Plan:

   In the event of an emergency during a lab that requires evacuation of the building, please leave the lab immediately, but calmly. Our lab group will meet at the lawn between Bech, Shuhaw, and Baker Halls to make sure everyone got out of the building safely and to receive further instructions.

8. Accommodation for students with disabilities

   Authorization for Academic Accommodations Letter from the Disability Resources Department is needed for any disability-related accommodations, including notetaking, test taking services, and special equipment/furniture, etc. Please let your instructor know about such a need as soon as possible.

9. Grading

   Homework (12%): There will be 12 homework assignments following completion of each chapter, 10 points each.

   Total points 120.

   Laboratory (48%): There will be 12 lab-reports 40 points each.

   Total points 480.

   Lab Notebooks (5%): There will be 5 lab notebook grades (per each in-person lab session) 10 points each.

   Total points: 50

   Final Exam (35%): The final exam will be comprehensive and will be conducted online.

   Total points 350.

   Final grade (100%): Total points 1000.

10. The grading scale:

≥88% A	880-1000 points
≥76% B	760-879 points
≥65% C	650-759 points
≥50% D	500-649 points
<50% F	below 500 points

11. Exam dates:

    Final Exam (comprehensive):

    May 20, 2021 – 8:00 am – 10:30 am

12. Lab schedule

Class: Chem 3AL, Sections: 5109 (Thursday), 5096 (Friday)

Instructor: Osman F. Güner, PhD

Week	Day	Date	Lab This Week
1	M	1/18/2021	**Martin Luther King Holiday**
	T	1/19/2021	**PD Day (no classes)**
	Th	1/21/2021	Intro to CHEM 3AL (online)
	F	1/22/2021	Intro to CHEM 3AL (online)
2	Th	1/28/2021	Safety Training I (online)
	F	1/29/2021	Safety Training I (online)
3	Th	2/4/2021	Laboratory Notebook, Excel Training, Calculations and Problem-solving (online)
	F	2/5/2021	Laboratory Notebook, Excel Training, Calculations and Problem-solving (online)
4	Th	2/11/2021	**PDA Day (no classes)**
	F	2/12/2021	**Lincoln's Day Holiday**
5	M	2/15/2021	**Washington's Day Holiday**
	Th	2/18/2021	Measurements and Density (online)
	F	2/19/2021	Measurements and Density (online)
6	Th	2/25/2021	Naming chemical compound (online)
	F	2/26/2021	Naming chemical compound (online)
7	Th	3/4/2021	InPerson 1: Check in. Safety Training (II). Synthesis of CuSO4.5H2O
	F	3/5/2021	InPerson 1: Check in. Safety Training (II). Synthesis of CuSO4.5H2O
8	Th	3/11/2021	Stoichiometry drill (online)
	F	3/12/2021	Stoichiometry drill (online)
9	Th	3/18/2021	InPerson 2: The Ideal Gas Law
	F	3/19/2021	InPerson 2: The Ideal Gas Law
3/22 to 3/28			**No Classes-SPRING BREAK**
10	Th	4/1/2021	Chemical Reactions (online)
	F	4/2/2021	Chemical Reactions (online)
11	Th	4/8/2021	InPerson 3: Heat Capacity of an Unknown Metal
	F	4/9/2021	InPerson 3: Heat Capacity of an Unknown Metal
12	Th	4/15/2021	Thermochemical calculations (online)

	F	4/16/2021	Thermochemical calculations (online)
13	Th	4/22/2021	InPerson 4: Atomic Spectra
	F	4/23/2021	InPerson 4: Atomic Spectra
14	Th	4/29/2021	Lewis Dot Diagrams and Molecular Modeling (online)
	F	4/30/2021	Lewis Dot Diagrams and Molecular Modeling (online)
15	Th	5/6/2021	InPerson 5: Determination of the Molar Mass of a Diprotic Acid
	F	5/7/2021	InPerson 5: Determination of the Molar Mass of a Diprotic Acid
16	Th	5/13/2021	Intermolecular Forces (online)
	F	5/14/2021	Intermolecular Forces (online)
17	Th	5/20/2021	**Comprehensive Lab Exam**
	F	5/21/2021	**Comprehensive Lab Exam**
18	Th	5/27/2021	**Lab Report and Homework final submissions**
	F	5/28/2021	**Lab Report and Homework final submissions**
	Sat	5/29/2021	Commencement