Chemistry 60 Course Syllabus
Chemistry for Allied Health

Santa Rosa Junior College Spring 2020

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Office: Doyle Hall 204 Sections: 4872, 4802

Office Hours		T,Th	9:35 am–10:30 am, 204 Doyle Hall 12:00 pm–12:30 pm, 204 Doyle
Lecture		T,Th	10:30 am–12:00 pm, PC1101 Capri Creek
Lab Lecture	**Section 4872**	T	12:30 pm – 1:30 pm, PC244 Doyle Hall
Lab	**Section 4872**	T	1:30 pm – 4:30 pm, PC 208 Doyle Hall
Lab Lecture	**Section 4802**	Th	12:30 pm – 1:30 pm, PC244 Doyle Hall
Lab	**Section 4802**	Th	1:30 pm – 4:30 pm, PC 208 Doyle Hall

This syllabus is to be considered as an agreement. Continued registration in this course means that you agree to the policies and procedures outlined in this syllabus. This syllabus is intended to give the student guidance in what may be covered during the semester and will be followed as closely as possible. However, the instructor reserves the right to modify, supplement and make changes as the course needs arise.

Important Dates

Last day to drop without a 'W': Sunday, Feb. 2, 2020
Last day to drop with a 'W': Sunday, April 19, 2020
Final exam Tues. May 19, 2019, 10:00 am-12:45 pm

Course Description

Basic concepts of general, organic and biological chemistry. Satisfies the requirements of nursing and related majors that require one semester of chemistry.

Course Requirements

Recommended: Eligibility for ENGL 100 or ESL 100 and Eligibility for MATH 150B.

Course Materials Required:

1) Timberlake, An Introduction to General, Organic, and Biological Chemistry, Prentice Hall, 11th edition,
2) Chemistry 60 Laboratory Manual, 10th ed. Arbor Crest Publishing, Omrčen, Tatjana (2019)
3) A spiral bound notebook for laboratory notes
4) A simple scientific calculator with exponential & logarithmic capabilities
5) Protective eyewear and apron must be used in the laboratory **at all times** as required by California State law. These items are covered by your fees will be provided when you check out a laboratory locker.

Student Learning Outcomes

1) Students will be able to recognize and apply the underlying chemical foundations of medicine and life.

2) Students will be able to correlate microscopic and macroscopic behavior of matter.

3) Students will be able to solve quantitative problems relating to chemical principles.

4) Students will be able to safely use basic equipment to observe and measure chemical and physical properties in the laboratory.

Grading

Your semester grade is based on four unit exams, laboratory reports, and the final exam.

Unit exams	600 points
Final exam	150 points
Quizzes/homework	50 points
Labs	200 points
Maximum Possible	1000 points

Grades are neither bestowed upon students by instructors, nor are they an entitlement, but are entirely *earned* by students. Realize that both objective factors (such as exam scores and problem/homework scores to which numerical values can be assigned) and subjective factors (such as effort, improvement, initiative, honesty, participation, academic growth, etc., which cannot be easily tagged with a number) will be taken into account at the end of the semester when letter grade assignments are made. Borderline cases will be decided after taking into consideration such factors as: *academic growth, classroom participation, initiative, attendance, punctuality, positive attitude and individual motivation*.

Approximate Scale for Letter Grades

A (88-100%) B (77 – 87%) C (66 – 76%) D (50 – 65%) F (Below 50%)

Make-up Policy

There will be no early or late exams. All exams will be given at the scheduled time and make-up exams are not possible. Missed exams due to medical and family emergencies will be addressed on an individual basis; however, valid documentation must be provided. There are no make-up labs.

Unit Exams 600 points
Each of the four unit exams will be based on material covered in classroom, laboratory and homework completed to that date.

Final Exam 150 points
The final exam will be a comprehensive, primarily multiple choice exam covering all topics covered during the semester. The grade on one low scoring unit exam can be replaced with a better score in the corresponding unit in the final exam.

Laboratory 200 points
The laboratory experiments are an integral part of the class. Experiments will serve to reinforce concepts covered in lecture and will also be used to introduce new ideas. Additionally, they allow you to gain the experience of being an experimental scientist and allow you to see Chemistry in action. There will be a mixture of experiments, conceptual worksheets, and additional lecture topics. Note that any of these activities are also potential sources of material for exams. You should come to each lab session with 1) your lab notebook, 2) a pen to record data, and 3) your lab manual. The section of your lab manual describing the scheduled activity must be read before lab commences and any pre-lab assignment must be completed. Lab reports must be submitted to the instructor in lab before start of new experiment. See lab schedule for report due dates. Of primary importance during the lab sessions is **safety**. For this reason, anyone who arrives late to a lab lecture and does not hear the introductory lecture may be prohibited from performing that experiment. Students must wear approved safety goggles at all times while in the laboratories. If you arrive more than 10 minutes late to lab or do not have your pre-laboratory assignment, you will not be allowed to start the lab.

For laboratory reports, neatness, organization, completeness and accuracy are not only expected, **they are demanded!** Any work that is sloppy, poorly organized, incomplete or inaccurately done will be either rejected or severely graded. Pages torn from spiral bound notebooks will not be accepted. Reports that are submitted after the time due will be accepted with a penalty.

Attendance
Your regular attendance in lecture highly encouraged and laboratory is MANDATORY. Class attendance is a critical component of the learning process. A large amount of material will be covered in class and you are putting yourself at a disadvantage by missing class. In each class, understanding new concepts is dependent on your grasp of material covered in previous classes. Any undue number of absences from lecture (3 or more per summer session unless cleared by me – preferably ahead of time) may result in an individual being dropped from the course, or in a significant reduction of that student's course grade. Students are expected to notify the instructor of any anticipated absences or late/missed

assignments prior to the due dates by email. Class meetings start on the half hour. Conversations should end at that time, and you should be prepared to commence taking notes and working on practice problems. If you arrive late, please enter the room quietly. All students should bring a calculator (phone/laptop calculator is acceptable for regular lecture, but NOT during quizzes or exams) and be prepared to work on problems in class.

Lab attendance is mandatory although it is understood that illnesses and emergencies do occur, please notify the instructor as soon as possible if you must miss a lab. There are typically no make-ups for lab, but in the case of illness or other serious circumstances, see the instructor for possible reassignment or partial credit options. The course is designed with one dropped lab, to be used in the case of an illness, emergency or late add situation. A second missed lab will result in a zero for that lab assignment. Because the laboratory portion is such an integral part of the chemistry learning process, a student who receives an "incomplete" rating on three or more lab activities will receive a grade of F for the entire course. Completion of a lab activity requires attendance of the lab session and submission of a lab report no less than 2 weeks after the assignment is due.

Student Expectations

Academic Decorum

All students are expected to know the Student Conduct Code (http://www.santarosa.edu/for_students/rules-regulations/scs/section1.shtml) and adhere to it in this class. Inappropriate behavior in the classroom will result in a referral to the Vice President of Student Services for disciplinary due process.

Each student is expected to be considerate and polite to fellow students and instructor. Please turn off all potentially disruptive electronic devices before start of class. If arriving late, please enter quietly. If you must leave due to exigent circumstances, please seat yourself such that you can exit with minimal disruption to other students and the instructor.

Academic Integrity

Students are expected to complete all assignments, lab reports and examinations with total honesty. Although working together on these assignments is allowed, each student must do his/her own work and use his/her own words. **Copying another student's work or laboratory assignments is considered cheating and both students will receive a ZERO for the assignment.** Please read the college policy/procedure on academic integrity at: http://www.santarosa.edu/polman/3acadpro/3.11P.pdf Students who violate the district standards of academic honesty by engaging in cheating, plagiarism, impersonation, mis-representation of facts or committing other acts of dishonesty will be dismissed and a grade of "F" will be assigned, regardless of their level of performance up to that point in the semester.

Good Labkeeping

Maintaining a tidy work area in the lab and cleaning up after yourself are requirements for (1) participating in and (2) leaving the laboratory. The stockroom staff is friendly and helpful, but they do not have time to clean up after everyone. After each lab, the counters, floors, sinks and balances should be clean, stools well stacked in the closet, equipment in its proper location, and chemical waste disposed of in the correct container. All students in a section will be held accountable for cleaning up the lab, regardless of who made any messes. The lab will be clean when you come in, so please show consideration for your colleagues by leaving it in *better* condition than when you arrived.

Course Policies

Re-evaluation of Graded Work

If you believe that your work has been graded incorrectly, please attach a brief note explaining the suspected error and submit it to me within two weeks of the day it was returned to the class. Do not write on any work that you are submitting for a re-grade. If you are comparing your graded materials with that of other students, both your work and that of your colleague must be submitted together for consideration. The entire submission will be re-evaluated, and the score may be adjusted up, down, or not at all.

Recording of Lectures

The lectures in this course are for you to learn from and take notes from. They may not be recorded in video form. They may be recorded in audio form only with permission of the instructor, and then only for your personal use in studying for the class.

Drops, Withdrawals, and Incompletes

Please be aware, it is the students' responsibility to drop any course that they do not intend to complete and accept a grade. The instructor may drop any student enrolled in a course that is not present or has not made prior arrangements with the instructor by the second class roll call.

Safety and General Information

Laboratory Safety

Safety in the laboratory is of primary importance. While in the laboratory, you must be appropriately dressed in long pants and closed-toed shoes. Backpacks and other loose articles must be stored in the cubbies provided, not on the floor. If you have long hair, it must be tied back. When anyone in class is working on chemistry, everyone must be wearing safety goggles. These may be worn over prescription glasses. Food and drink are strictly prohibited in lab. More complete safety instructions will be given to you in lab.

Emergency Information

In case of natural disasters, emergencies, or fires, we may need to evacuate the building. In the event of an evacuation, turn off any flame or heat source you are using and exit the building quickly and orderly. Do not stop for personal items. Find the nearest exit for the building and exit the building. Assemble at the triangular lawn on the west corner of the campus near the creek until your instructor takes roll and provides you with instructions. In case of an earthquake, hide under the desk or otherwise seek cover from falling overhead objects. Brace yourselves and hold on for the duration of the quake. Once the quaking has stopped, quickly exit the building. In case of a major chemical spill or if the chemical spill alarm is triggered, leave everything and evacuate the building. If you are a student with a disability who may need assistance in an evacuation, please see me during my office hours as soon as possible so we can discuss an evacuation plan. Copies of the red *Emergency Preparedness Handbook* are posted throughout the building and have more detailed information and procedures for most imaginable emergencies. Any type of emergency can be reported to the District Police Dispatcher at (707) 527-1000.

Accommodations for Students with Disabilities

If you need disability-related accommodations for this class, such as a note taker, test-taking services, special furniture, etc., please provide the authorization letter from the Disability Resources Department (DRD) to your instructor as soon as possible. You may also speak with me privately during office hours about your accommodations. Please fill out any paperwork for testing accommodations in advance of the exam, and keep me informed of what you need. I am happy to provide accommodations, but I do appreciate having a few days' advance notice. If you do not have authorization from DRD, contact the office directly (527-4278).

Recommended Study Procedures

a) Check the Lecture-Laboratory Schedule and website frequently, and budget sufficient time to prepare for upcoming class activities and assignments.

b) When readings in a new chapter are assigned, begin by skimming the entire chapter once and read the Key Concepts and Key Terms list or similar. Then go back and carefully study the pages of assigned reading.

c) Look up the meanings of new terms in the Glossary and jot down questions to ask your instructor either during the lecture or outside of class. **Work as many on-line, in-chapter exercises and end-of-chapter problems as possible** before coming to the lecture on that material. These attempted and corrected solutions should be organized in a notebook for easy reference prior to examinations. If you have purchased the "Solutions Manual", always try to work each problem without first referring to the set-up and answer provided. Use the manual mainly to check your strategies and answers or to furnish help when you are truly drawing a blank.

d) After the lecture, ask questions from your list that remains unanswered during your instructor's scheduled office hours or make an appointment. Also plan to use slack laboratory time to seek clarification from your instructor on any aspect of the course.
e) As soon as possible after the lecture, re-copy or refine your notes, re-read the textbook and work additional end-of-chapter or on-line problems while the lecture is still fresh in your mind.
f) Before examinations, study the text and review your notes and solutions once again. Get plenty of rest and don't forget to bring some sharpened pencils with erasers and a scientific calculator.
g) After the exam, study those areas you were weakest in. Re-work the exam problems until you obtain the correct answers. Use the posted exam key if necessary. Always study the posted key even if you earned a respectable score, and copy the correct solutions to provide useful strategies in solving future problems. The answer keys will only be posted for about two weeks following each exam.
h) If you start falling behind in the class, double your efforts, and seek help from your instructor before it is too late.

Chem 60 Class Calendar Spring 2020

Tentative Dates for Lectures, Exams and Labs

Week	Day	Date	Lecture Topics	Lab This Week
1	T	1/14/2020	Intro / Ch. 1 - Measurements	Lab Intro/Safety/Measurements
	Th	1/16/2020	Ch. 1 - Measurements	Lab Intro/Safety
	Su	1/19/2020	Last day to register w/o instructor's add code	
2	M	1/20/2020	**Martin Luther King Holiday**	
	T	1/21/2020	**PD Flex Day (no classes)**	
	Th	1/23/2020	Ch. 1, calculations/density	Measurements
	Su	1/26/2020	Last day to drop and be eligible for a refund	
3	T	1/28/2020	Ch. 2 - Matter	Separation of a Mixture
	Th	1/30/2020	Ch. 3 - Atoms and Elements	Separation of a Mixture
	Su	2/2/2020	Last day to add w/instructor's add code; Last day to drop without a "W"	
4	M	2/3/2020	First Census Day	
	T	2/4/2020	Ch.4 - Ions	Identification of a Pure Substance
	Th	2/6/2020	Review	Identification of a Pure Substance
5	T	2/11/2020	**Exam 1**	TBA
	Th	2/13/2020	**PDA Day (no classes)**	
	F	2/14/2020	**Lincoln's Day Holiday**	
6	M	2/17/2020	**Washington's Day Holiday**	
	T	2/18/2020	Ch. 4 - Covalent bonding	Lewis Structures (Dry Lab)
	Th	2/20/2020	Ch. 5 pt.1 - Intro to Moles	Lewis Structures (Dry Lab)
	Su	2/23/2020	Last day to opt for P/NP	
7	T	2/25/2020	Ch. 6 - Gases	Carbon Dioxide in Breath (handout)
	Th	2/27/2020	Ch. 7 - Solutions	Carbon Dioxide in Breath (handout)
8	T	3/3/2020	Ch. 7 - Solutions	Concentration of a Salt Solution
	Th	3/5/2020	Ch. 7/Review	Concentration of a Salt Solution
9	T	3/10/2020	**Exam 2**	Observing Chemical Reactions
	Th	3/12/2020	Ch.5 pt. 2 - Stoichiometry	Observing Chemical Reactions
3/16 to 3/22			**No Classes-SPRING BREAK**	
10	T	3/24/2020	Ch. 8 - Acids and Bases	Stoichiometry (handout)
	Th	3/26/2020	Ch. 8 - Acids and Bases	Stoichiometry (handout)
11	T	3/31/2020	Ch. 10: Organic Intro	Acids, Bases and Buffers
	Th	4/2/2020	Ch. 11 - Hydrocarbons	Acids, Bases and Buffers
12	T	4/7/2020	Ch. 12 - Functional groups	Isomers (handout)
	Th	4/9/2020	Review	Isomers (handout)
13	T	4/14/2020	**Exam 3**	Synthesis of Acetaminophen
	Th	4/16/2020	Ch. 14 - Carboxylic acids	Synthesis of Acetaminophen
14	T	4/21/2020	Ch. 13 - Carbohydrates	Chromatography with Vegetable Pigm
	Th	4/23/2020	Ch. 15 - Lipids	Chromatography with Vegetable Pigm
15	T	4/28/2020	Ch. 16 - Proteins	Synthesis of Soap
	Th	4/30/2020	Ch. 17 - Nucleic acids	Synthesis of Soap
16	T	5/5/2020	Ch. 9 Nuclear Chemistry	(handout)
	Th	5/7/2020	Review	(handout)
17	T	5/12/2020	**Exam 4**	Check out / Clean up
	Th	5/14/2020	Review	Check out / Clean up
18	T	5/19/2020	**FINAL EXAM 10:00 - 12:45**	