Chemistry 1B Section 2552 Course Syllabus
General Chemistry Fall 2017

Instructor: Dr. Bindu Meprathu E-Mail: bmeprathu@santarosa.edu
Office: Bech Hall 1970 Phone: 707-527-4999 x9712.
https://profiles.santarosa.edu/bindu-meprathu

Office Hours	From 8/22/17 to 9/19/17:	Tue/Thurs	10:45am-12:00pm
	From 9/21/17 onwards:	Tue/Thurs	8:15am-9:00am
		Tue	3:00pm-3:30pm
		Thurs	3:00pm-3:20pm

Lecture (2552)	Tue/Thurs	9:00am-10:30am	1999 Bech Hall
Lab (2552)	Tue/Thurs	12:00pm-3:00pm	1960 Bech 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.

Course Description: A continuation of Chemistry 1A. Topics include chemical kinetics, thermodynamics, chemical equilibrium, nuclear chemistry, electrochemistry, coordination compounds and bonding, and selective topics in descriptive chemistry. Laboratory emphasizes methods of analytical chemistry and quantitative work. Graded only.

Pre-requisite: Completion of Chem 1A or equivalent course with a passing grade of C or higher.

Student Learning Outcomes: After successful completion of this course, a student will be able to: 1. Analyze and solve chemical systems using quantitative models. 2. Relate the concepts of chemical equilibrium and free energy. 3. Apply the principles of quantitative analysis in a laboratory setting. 4. Analyze unknown samples using advanced instrumentation. 5. Write comprehensive laboratory reports to effectively analyze data and communicate results and conclusions. The Complete Course Outline can be found through the SRJC Schedule of Classes:
https://portal.santarosa.edu/SRWeb/SR_ScheduleOfClasses.aspx

Required materials:
1) Textbook – Gilbert, Kirss, Foster. Chemistry: An Atoms-Focused Approach, First Edition. W.W. Norton & Company, Inc.: New York (2014). Textbook may be purchased at the SRJC Bookstore or other source that is cheaper.
2) Lab manual – Chemistry 1B Laboratory Manual. Santa Rosa Junior College (Fall 2017).
3) Bound, self-copying laboratory notebook.
4) Scientific calculator. Must be able to do logs and square roots.
5) Safety goggles and laboratory apron. These can be obtained from the stockroom during the first two weeks of lab.
6) USB flash drive (for laboratory work).

Grading:

Your semester grade is based on three unit exams, laboratory reports, in-class quizzes, seminars and the final exam.

Unit exams	450 points
Final exam	150 points
Labs	250 points
Quizzes	100 points
Seminars	50 points
Maximum Possible	1000 points

Lab: 25% Exams (including the final): 60% Quizzes: 10% Seminar: 5%. Homework from the textbook will be assigned regularly but not collected for points. There will be **three midterm exams** (worth 15% each) plus a **final exam** (20%). Quizzes may be given during either lecture or lab lecture and will not be announced in advance. Each of the three unit exams will be based on materials covered in classroom, laboratory work and other assigned work. Final exam will be a comprehensive, multiple choice exam including all topics covered during the semester but emphasis will be laid on material covered after exam 3. The lab score is based on the quality of results and technique as well as the quality and completeness of **laboratory reports**. Due dates and formats for lab reports will vary; the specific requirements for each report will be explained throughout the semester. A schedule of lab activities and tentative exam dates is provided at the end of this syllabus. Note: You must pass the lab and lecture in order to pass the course. In other words, if you get less than 56% of the possible points in lab or in lecture, you will receive an F in the course.

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 personal initiative*.

Approximate Scale for Letter Grades

A (88-100%) B (77 – 87%) C (66 – 76%) D (56 – 65%) F (Below 56%)

Attendance:

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. Since the laboratory is very important to this course, missing more than three labs, unexcused, will result in a grade of F. Excused absences require documentation of a serious and compelling reason, for example a doctor's note. Students missing more than 10% of the lecture and laboratory hours may be dropped from class per district attendance policy.
http://www.boarddocs.com/ca/santarosa/Board.nsf/goto?open&id=A83PZ466E31A

Late work: Quizzes and exams will generally not be given late. Lab reports will be accepted late with a penalty of 20% per school day (Saturday and Sunday excluded).

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 for Academic Accommodations Letter from the Disability Resources Department (DRD) to me as soon as possible. Please fill out any paperwork necessary for testing accommodations in advance of the exam, and keep me informed of what you need. If you have not received authorization from DRD, contact the office directly. It is located in the DRD Bertolini Student Center East Wing (527-4278).

Course Content and Format

This course will cover 6 chapters from the textbook and 20 laboratory experiments and activities. Lecture material will be coupled with practical laboratory experience to develop the ability to analyze and communicate scientific concepts and data in both qualitative and quantitative manners. Each week will involve reviewing chapter materials, preparing for laboratory and writing laboratory reports.

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.

Classroom Policies

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.

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.** 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.
Please read the college policy/procedure on academic integrity at:
http://www.boarddocs.com/ca/santarosa/Board.nsf/goto?open&id=A63TMC78051C

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. Last date to drop this course without a 'W' is 9/10/2017, last day to drop with 'W' is 11/19/2017. 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.

Incompletes will only be assigned to students with medical or family emergencies, which will not allow the completion of the course. Incompletes will be addressed on an individual basis. The student must have a passing grade at the time of requesting an incomplete.

Tentative Schedule Chem 1B section 2552

Wk	Day	Date	Lecture Topics	Laboratory
1	M	8/21/2017		
	T	8/22/2017	Intro/Ch11:Properties of Solns	Safety
	W	8/23/2017		
	Th	8/24/2017	Ch11: Properties of Solns	Locker check. Excel practice
	Su	8/27/2017	Last day to register/add w/o instructor's signature or add code	
2	M	8/28/2017		
	T	8/29/2017	Ch11: Properties of Solns	Determination of MM by FP Depression
	Th	8/31/2017	Ch13: Chemical Kinetics	Study of Kinetics of Crystal Violet bleaching
	Su	9/3/2017	Last day to drop semester length class and be eligible for a refund	
3	M	9/4/2017	**Labor Day Holiday**	
	T	9/5/2017	**PDA Day (no classes)**	
	Th	9/7/2017	Ch13: Chemical Kinetics	The Iodine Clock and Rates of Rxns
	Su	9/10/2017	Last day to drop class w/o "W" symbol or add w/add code	
4	M	9/11/2017		
	M	9/11/2017	First Census Day	
	T	9/12/2017	Ch13: Chemical Kinetics	The Iodine Clock and Rates of Rxns
	Th	9/14/2017	Ch14: Chemical Equilibrium	Equilibrium Constant of Esterification Reaction
5	M	9/18/2017		
	T	9/19/2017	Ch14: Chemical Equilibrium	Equilibrium Constant of Esterification Reaction(cont)
	W	9/20/2017		
	Th	9/21/2017	Ch14: Chemical Equilibrium	Research project (TBA)/Library
6	M	9/25/2017		
	T	9/26/2017	**Exam 1 (Ch11, 13, 14)**	In-Lab Activity: Acid-Base Equilibria
	W	9/27/2017		
	Th	9/28/2017	Ch15: Aqueous Equilibria	Infrared Spectroscopy
7	M	10/2/2017		
	T	10/3/2017	Ch15: Aqueous Equilibria	Analysis of a Mixture of Carbonate and Hydrogencarbonate
	Th	10/5/2017	Ch15: Aqueous Equilibria	Study of Acid-Base Titration Curves
8	M	10/9/2017		
	T	10/10/2017	Ch15: Aqueous Equilibria	Study of Buffers
	W	10/11/2017		
	Th	10/12/2017	Ch15: Aqueous Equilibria	The Solubility-Product Constant of Copper(II) Iodate
9	M	10/16/2017		
	M	10/16/2017	Midterm progress indicators posted in student portal	
	T	10/17/2017	Ch15: Aqueous Equilibria	The Solubility-Product Constant of Copper(II) Iodate (cont.)

	Th	10/19/2017	Ch15: Aqueous Equilibria	TBA
10	M	10/23/2017		
	T	10/24/2017	**Exam 2 (Ch 15)**	In-Lab Activity: Thermodynamics
	W	10/25/2017		
	Th	10/26/2017	Ch12: Thermodynamics	Temperature Dependence of the Vapor Pressure of Water
11	M	10/30/2017		
	T	10/31/2017	Ch12: Thermodynamics	Vapor Pressure of Water (cont.)
	W	11/1/2017		
	Th	11/2/2017	Ch12/Ch17: Electrochemistry	Gas Chromatography of Alcohol in Beverages
12	M	11/6/2017		
	T	11/7/2017	Ch17: Electrochemistry	Supercritical Liquid Extraction of Essential Oils and GCMS Analysis
	W	11/8/2017		
	Th	11/9/2017	Ch17: Electrochemistry	GC and GCMS (cont.)
	F	11/10/2017	**Veteran's Day Holiday**	
13	M	11/13/2017		
	T	11/14/2017	Ch17: Electrochemistry	Electrochemical Cells
	W	11/15/2017		
	Th	11/16/2017	Ch16: Coordination Compounds	Study of Electrolysis
	Su	11/19/2017	Last day to drop class with "W" symbol	
14	M	11/20/2017		
	T	11/21/2017	**Exam 3 (Ch 12, 17)**	In-Lab Activity: Coordination Compounds
	W	11/22/2017		
	Th	11/23/2017	**Thanksgiving Holiday**	
	F	11/24/2017	**Professional Development Day - No classes**	
15	M	11/27/2017		
	T	11/28/2017	Ch16: Coordination Compounds	Transition Metal Chemistry
	W	11/29/2017		
	Th	11/30/2017	Ch16: Coordination Compounds	Transition Metal Chemistry
16	M	12/4/2017		
	T	12/5/2017	Ch16: Coordination Compounds	Lab Exam
	W	12/6/2017		
	Th	12/7/2017	Ch21: Nuclear Chemistry	Nuclear Chemistry
17	M	12/11/2017		
	T	12/12/2017	Ch21: Nuclear Chemistry	Check-out; Research Project Oral Reports
	W	12/13/2017		
	Th	12/14/2017	Review	Research Project Oral Reports
18	Sat	12/16/2017		
	Th	12/21/2017	**FINAL 7 am to 9:45 am**	
	M	1/6/2018	Fall Semester Processing Finalized	
		12/23-1/14	Semester Break	