1. Course information

1.1 Contact information and office hours

Course Location: Online at http://aa6kj.hopto.org/eloranta_lab/CHEM102/
Formal Course Meeting Times (ansynchronous class format):
Section 1 (lecture): Mon & Wed 08:00 - 09:15am.
Section 1 (discussion): Mon & Wed 09:30 - 10:20am.
Section 2 (lecture): Tue & Thu 08:00 - 09:15am.
Section 2 (discussion): Tue & Thu 03:30 - 4:20pm.
Required Co-Enrolled Discussion Section: Chem 102D.
Instructor: Dr. Jussi Eloranta
Office: NA
Office phone: NA
Email: Jussi.Eloranta@csun.edu OR eloranta@aa6kj.hopto.org
Office hours: By email at any time

1.2 General information

Chem 102 is the second-semester course of the year-long general chemistry sequence. It is a lecture course that must be taken with the co-requisite lab (Chem 102L) and discussion section (Chem 102D). From the course catalog: Prerequisite: CHEM 101/L with a minimum grade of C− in CHEM 101. Corequisite: CHEM 102L. Continuation of CHEM 101. Introduction to kinetics, gas phase and solution equilibria, electrochemistry, chemical thermodynamics, radio, organic chemistry and the descriptive chemistry of the more familiar metals and nonmetals. Recitation portion deals with problem solving, review of the lecture material and quizzes. Lab section consists of experiments dealing with kinetics, acid-base and solubility equilibria, selected reactions of metals and nonmetals, and qualitative elemental analysis. Completion of CHEM 102/L satisfies General Education, Natural Sciences, including the corresponding lab requirement. 3 hours lecture; 1 hour recitation per week; one 3-hour lab per week.

1.3 Student Learning Outcomes

Students successfully completing this class will be able to:

- Describe the features of various types of chemical kinetics
- Understand chemical equilibrium and its implications
- Understand electrochemistry and electrochemical reactions
- Describe thermodynamic properties important to chemistry, understand their relation to each other and to chemical properties
- Perform chemical calculations associated with kinetics, equilibrium, electrochemistry, and thermodynamics

1.4 Class materials

The required textbook for the course is Chemistry, A Molecular Approach (Volume 2), Custom Edition for CSUN, by Nivaldo Tro (5th Edition).

You will need a scientific calculator for the exams. All written/printed material (including the textbook) will be allowed in the exams.

Your CSUN email account is the only way that I can communicate with you, I cannot send emails to a gmail account, yahoo account, etc. directly from my class roster. You are responsible for regularly checking your CSUN email account.

1.5 Success in the course

Chem 102 is traditionally a very difficult course for many students. Here are some good ways to ensure your success in the course.

- Study daily. **Science majors should study 25-35 hours per week total. This means you should study for this course for 8-10 hours per week. That is 1-2 hours per day!**
- Study effectively. Make sure you have a quiet place to study that is free of distractions such as television, music, facebook, etc. Avoid blind memorization of specific types of problems and formulas. Focus on understanding the ideas and finding the associated details quickly.
- **Do problems!** I cannot emphasize this enough. Do as many different types of problems as possible. The assigned discussion homework is mandatory.

2. Online lecture schedule

Week #	Topic	Starting week	Book chapter
1	Course introduction	Jan 25	15
1	Chemical kinetics		15
2	Chemical kinetics	Feb 1	15
2	Chemical kinetics		15
3	Chemical equilibrium	Feb 8	16
3	Chemical equilibrium		16
4	Chemical equilibrium	Feb 15	16
4	Chemical equilibrium		16
5	Acids and bases	Feb 22	17
5	Acids and bases		17
6	Acids and bases	Feb 28	17
6	Acids and bases		17
7	Aqueous ionic equilibrium	Mar 1	18
7	Aqueous ionic equilibrium		18
8	Aqueous ionic equilibrium	Mar 8	18
8	Aqueous ionic equilibrium		18
–	Spring break	Mar 15 - 21	–
9	**1st exam**	(section 1: Mar 22, section 2: Mar 23)	15 – 18
9	Thermodynamics	Mar 29	19
10	Thermodynamics		19
10	Thermodynamics	Apr 5	19
11	Thermodynamics		19
11	Electrochemistry	Apr 12	20
12	Electrochemistry		20
12	Electrochemistry	Apr 19	20
13	Electrochemistry		20
13	Radioactivity and nuclear chemistry	Apr 26	21
14	Radioactivity and nuclear chemistry		21
14	Radioactivity and nuclear chemistry	May 3	21
	2nd exam	(section 1: May 10, section 2: May 11)	19 – 21

NOTE: There are two exams on the dates given above. There is no final exam on the date indicated on Solar.

3. Grading

3.1 Grade components

Course grading	points
Midterm	100
Final	100
Total	200

3.2 Grade scale

Overall average	Letter grade*
$100 - 91.0\%$	A
$90.5 - 88.0\%$	A-
$87.5 - 84.0\%$	B+
$83.5 - 80.0\%$	B
$79.5 - 76.0\%$	B-
$75.5 - 71.0\%$	C+
$70.5 - 67.0\%$	C
$66.5 - 63.0\%$	C-
$62.5 - 60.0\%$	D+
$59.5 - 55.0\%$	D
$54.5 - 50.0\%$	D-
$\leq 49.5\%$ *	F

*Note: If needed, the percentages above will be lowered (curved downward). The listed letter grades are the *minimum* grade you would receive with that percentage in the course.

3.3 Exams

This course will have two exams, which determine your grade in the class. The examinations will consist of problems or questions pertaining to relevant course information, including lecture material and *information from the textbook not necessarily discussed in lectures*. Use of all course material (including the textbook), calculators, and reference material are allowed during the exams. Devices that are able to go online are not allowed.

Makeup exams or excused exams are available for a legitimate, *documentable* excuse. The instructor must be notified by email prior to the exam (same day) in order to be able to make up an exam. However, please try your absolute hardest to make it to the exam, barring injury, illness, or bereavement (documentation such as a doctor's note will be required to make-up the exam). Make-up options may include taking a different exam, excusing the exam (calculating the final score out of fewer points), counting the final exam for more points, or any other reasonable option as determined by the instructor. Make-up exams are only offered under the most unusual and extreme circumstances. Make-up exams are given at the instructor's discretion.

If you feel that a mistake has been made in grading of your exam, you must inform the instructor within 7 days of the date on which exams are returned during the lecture. Corrections cannot be made after this time. Not being present the day exams are returned does not allow you to request a correction beyond the 7 day period.

4. Academic dishonesty

4.1 Definition

Academic dishonesty is defined in Appendix E of the University Catalog (p. 586-590) and is paraphrased here for the purposes of this course.

1. Do not cheat, plagiarize (see below), or attempt any activity to gain unfair academic advantage
2. During an exam or quiz: No use of cell phones, text messaging, instant messaging, cameras, smart watches, tablets, computers, or any device which can access the internet.

4.2 Plagiarism

Plagiarism is defined in Appendix E of the University Catalog (p. 588) to be:
Intentionally or knowingly representing the words, ideas, or work of another as one's own in any academic exercise. Comments:

1. Direct Quotation: Every direct quotation must be identified by quotation marks, or by appropriate indentation or by other means of identification and must by promptly cited in a footnote…
2. Paraphrase: Prompt acknowledgement is required with the material from another source is paraphrased or summarized in whole or in part in your own words..…
3. Borrowed Facts or Information: Information obtained in one's reading or research which is not common knowledge among students in the course must be acknowledged…

Penalties for violating the above terms include failure on the assignment or exam, failure of the course, and/or reporting to academic affairs. Violators will be reported to student affairs for possible punitive action at the University level in addition to any punitive action for the course.

5. Disabilities

Any student who feels that he or she may need an accommodation based on the impact of a disability should contact me privately to discuss your specific needs. Please contact Disability Resources and Educational Services (DRES) in room 110 of Bayramian Hall to coordinate reasonable accommodations for students with documented disabilities.