San José State University
Chemistry Department
Chem 030A, Intro Chem., Section 01 (40135), Fall 2016

Course and Contact Information

Instructor: Anh-Tuyet Tran, Ph.D.
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Office Hours: Monday 9:00 – 10:00 am, Wednesday 3:30 – 4:10 pm, Friday Noon – 1:00 pm
Class Days/Time: Monday and Wednesday 4:30 – 5:20 pm
Classroom: Morris Daley Auditorium (MD-101)
GE/SJSU Studies Category: B1-B3

Course Web Page
Course materials such as syllabus, handouts, notes, assignment instructions, etc. can be found on the Canvas learning management system course website. You are responsible for regularly logging on Canvas to learn of the updates.

Course Description
This course meets the SJSU’s Core General Education requirements for Physical Sciences for Non-science majors, and also prepares science or undeclared majors for Chemistry 1A (recommended Chem 30A final course grade of “B” or better for success in Chem 1A).

GE Learning Outcomes (GELO)
All general education courses are required to address issues of diversity and assess student’s written work.

1. **Diversity**: Issues of diversity shall be incorporated when addressing historical issues of physics and chemistry.

2. **Writing**: The minimum writing requirement is 1500 words for this course. Your writing will be assessed for grammar, clarity, conciseness, and coherence. Writing assignments will include an essay about a topic related to current events in chemistry, written lab reports, homework assignments and short answer questions on exams.
Course Learning Outcomes (CLO)

Physical Science (B1) Courses focus on: systems of classification, structure of matter, laws of thermodynamics, interaction of matter and energy, behavior of physical systems through time, physical processes of the natural environment.
Upon successful completion of this course, students will be able to:

1. CLO 1: Use the methods of science and knowledge derived from current scientific inquiry in physical science to question existing explanations. Course activities that will meet this requirement are all of the laboratory experiments that begin with a question or statement relating to the purpose/objective of the lab and questions at the end of the lab to probe your understanding of your data and the relationship to the concepts studied. In addition, there will be class discussions of how scientific discoveries such as the atom and renewable energy resources were derived from scientific inquiry.

2. CLO 2: Demonstrate ways in which science influences and is influenced by complex societies, including political and moral issues. The influence of science will be addressed in lectures where these relationships can be made, such as in medicine and healthcare, environmental issues or the technological advances used to discover the structure of the atom. You will also have the opportunity to write one essay on a topic to be determined later in the course.

3. CLO 3: Use the methods of science, in which quantitative, analytical reasoning techniques are used. Many of the labs and concepts require the use of quantitative and analytical reasoning techniques. For example, most of the labs require students to make observations, take measurements and use equations involving measured variables. In terms of reactions you will discover how balanced equations symbolically represent atoms and particles and a connection will be made to what you observe macroscopically.

Required Texts/Readings

Textbook

- If you plan to take Chem 30A only and will not continue onto Chem 30B, you may purchase the customized textbook, which has only chapters related to Chem 30A, to reduce the cost of textbook. Customized textbook ISBN: 9781269768702
- However, if you plan to take Chem 30B, it is recommended that you purchase the full version, which has all the chapters. Non-customized text book ISBN: 9780321750891

Other required materials

  Note this manual is a custom version available only at the SJSU Bookstore. Every student must have a lab manual. You cannot share one because you will be turning in pages from your manual for credit.
- Class Notes: “Chem 30A Lecture booklet”. It can be purchased from Chem. Club in DH 20 (located in the basement of Duncan Hall). Be prepared to pay CASH ONLY.

Course Requirements and Assignments

SJSU classes are designed such that in order to be successful, it is expected that students will spend a minimum of forty-five hours for each unit of credit (normally three hours per unit per week), including preparing for class,
participating in course activities, completing assignments, and so on. More details can be found from University Syllabus Policy S16-9 at http://www.sjsu.edu/senate/docs/S16-9.pdf.

Final Examination: Friday, Dec. 16th from 2:45 pm to 5:00 pm.
The final exam (150 points) is mandatory and cannot be missed. Failure to take the final exam will result in a failing grade. It will be comprehensive multiple choice questions and cover everything discussed in class. You will need to bring your photo ID card, as well as #2 pencils and non-programmable calculator. You should also bring a clipboard as a support in every exam. Handouts and scratch paper will be distributed. DO NOT WRITE DIRECTLY ON THE FINAL EXAM. You must strictly follow the instructions given in the exam in order for your final exam to be graded properly. PLAN AHEAD FOR YOUR FINAL EXAM. CHECK YOUR SCHEDULE AND MAKE SURE THAT OTHER EXAMS, WORK SCHEDULE, ETC., DO NOT OVERLAP.

Grading Information

**Midterms** (Closed book, closed notes)
The exams will focus on the (1) key concepts, (2) lecture notes, (3) homework assignments, and (4) additional recommended text problems. A clipboard and a simple scientific calculator may be used for all exams (programmable calculators are not allowed).

All exams are required and will count towards your grade. Make-up exams will NOT be generally given. Accommodations will be made ONLY for VERIFIED illnesses or VERIFIED legitimate emergencies.

**Exam Dates**
Exam 1: Monday, Oct. 10th  
Exam 2: Monday, Nov. 7th  
(100 points each)

**Take-Home Quizzes (50 points)**
Several take-home quizzes will be given. No make-ups for missed quizzes. Take-home quizzes must be submitted on assigned due dates, or they will not be accepted. The quizzes will be posted on your Chem 30A Lab Canvas account, and you will need to finish them online before the due dates. Once you submit your quiz on canvas, you cannot access it again so make sure you print a hard copy of the quiz for your reference. They help you prepare for the exams. More information will be given in lecture or lab meetings before the due dates.

**Term paper (30 points)**
Instructions on the term paper will be posted in Canvas. Please read and research on a topic of your choice. Your lab instructor will let you sign up for a chosen topic by the 7th week of the semester. The essay must be typed in double-spaced lines, 4 to 6 pages in length. Further details will be provided in lecture and/or lab. The due date of your essay is your lab day during the week of April 20th-24th. You will submit your paper to turnitin.com via your Chem 30A Lab Canvas. Papers not submitted to turnitin.com via Canvas will have a 5-point deduction. You may submit your essay any time before the due date, but the latest would be the night before the due date. Turnitin.com via Canvas will reject the papers submitted by the morning of the due date. Please plan ahead, as late papers will not be accepted!

**Laboratory work (200 points):** In addition to the Lecture section, you must also attend and complete the work in your lab section. Lab sections meet once a week for 2 hours and 50 minutes in DH 601. The Chemistry 30A Laboratory Greensheet will be on Canvas and in Chem 30A Lecture Booklet. To pass this course, all lab works must be completed and all lab reports must be submitted to your laboratory instructor. Please do not schedule appointments during your laboratory period. Missed laboratory periods may only be made up with permission
of your laboratory instructor, and only during the week for that particular experiment. To make-up a lab, you must obtain a signed pink make-up slip. This slip must be signed by your lab instructor or by Dr. Esfandiari (Lab Coordinator). Since there are many lab sections and students, it would be difficult to keep track of your records if you do not attend your scheduled lab. So, lab switching is greatly discouraged and may be done only in the case you have a compelling excuse (a medical emergency with appropriate documentation). ALSO, ALL STUDENTS MUST RECEIVE SAFETY INSTRUCTIONS AND PASS A SAFETY QUIZ.

The lab point break-down is as follows:

A) Safety quiz (10 points): this will be given during the first or second lab period and you must pass it to remain in Chem 30A course.

B) Lab reports/worksheets (160 points): You will have about 8 lab reports (20 points per lab report). To be prepared for the laboratory, read the experiment before coming to your laboratory session. In most experiments, you will have the option to work individually or in small groups. All lab works and reports must be completed and submitted to your lab instructor at the end of the lab session. Generally, no late lab reports will be accepted.

C) Independent lab report (20 points): You will design and write up a protocol to prepare the solution at a specific concentrations. The concentrations will be assigned by your lab instructor, prior to the due date. More information will be provided in lab and lecture meetings. This report must be turned in to your lab instructor at the beginning of your lab during the week of May 4th – 8th.

D) Subjective laboratory evaluation (10 points). See lab syllabus for more details.

**Determination of Grades**

Your course grade will be determined as follows:

- Two in-class lecture exams (100 points each) 200
- Comprehensive in-class final exam 150
- Take-home quizzes 50
- Lab work 200
- Term paper 30

Total: 630 points

Letter grades for the full course are based on the following percentage range:

- above 97.0 % A+
- 96.9 - 92.0 % A
- 91.9 - 89.0 % A-
- 88.9 - 85.0 % B+
- 84.9 - 80.0 % B
- 79.9 - 77.0 % B-
- 76.9 - 72.0 % C+
- 71.9 - 65.0 % C
- 64.9 - 61.0 % C-
- 60.9 - 57.0 % D+
- 56.9 - 54.0 % D
- 52.9 - 50.0 % D-
- Below 50.0% F

**Incompletes:** An incomplete will only be given under the following circumstances: (1) you have completed at least two-thirds of the course work with a grade of C or better, and/or (2) the reason that you cannot complete the course is due to an extreme emergency with appropriate documentation.

Students who wish to receive an incomplete and have not fulfilled the above requirements will receive a grade appropriate to their totals. If you decide to quit the class without taking the final exam, you will receive a WU grade, equivalent to an F with the option to repeat the class. Consult with your advisor and/or refer to SJSU Course Catalog for specific details.
Classroom Protocol

Attendance:

Regular attendance to lecture is essential for your success in this course. Please remember that skipping lecture of one class to study for another class is not an acceptable excuse. As you sign up for your course load, you are responsible for fulfilling the obligations that come with that course load. You are expected to read each chapter in the textbook and/or preview the lecture PowerPoint files posted in Canvas BEFORE the instructor begins to lecture on that material. Also you should read and plan for each lab experiment BEFORE coming to lab.

Please visit the instructor during office hours if you are having trouble with any of the concepts covered in lecture. It is recommended and encouraged that the office hours of any instructor involved in Chem 30A (Dr. Tran, Dr. Esfandiari, or any lab instructors) be used for individual help. Make sure that you know your lab instructor’s office hours. They will be announced in the lab meetings. Write this information into your lab manual or somewhere easily accessible to you.

Student Conduct: We hope that the classroom and laboratory will serve as an environment that will promote learning and the development of new ideas, as well as be a safe and respectful community. Behavior that interferes with the normal academic function in a classroom or lab is unacceptable. Students exhibiting this behavior will be asked to leave the class. Examples of such behavior include

a) Persistent interruptions or using disrespectful adjectives in response to the comments of others.

b) The use of obscene or profane language.

c) Yelling at classmates and/or faculty.

d) Persistent and disruptive late arrival to or early departure from class without permission.

e) Physical threats, harassing behavior, or personal insults (even when stated in a joking manner).

f) Use of personal electronic devices such as pagers, cell phones, PDAs in class, unless it is part of the instructional activity.

The university has a brochure on student conduct that you can view at [http://www.sjsu.edu/studentconduct/docs/ENGLISH%20Brochure.pdf](http://www.sjsu.edu/studentconduct/docs/ENGLISH%20Brochure.pdf)

University Policies

Per University Policy S16-9, university-wide policy information relevant to all courses, such as academic integrity, accommodations, etc. will be available on Office of Graduate and Undergraduate Programs’ Syllabus Information web page at [http://www.sjsu.edu/gup/syllabusinfo/](http://www.sjsu.edu/gup/syllabusinfo/)

Chem 30A Fall 2016 Course Schedule

Tentative schedule of lecture and lab:

Changes in class schedule will be announced in class at least one week ahead.
**Chem 30A Fall 2016**

**Note:** Lab reports and worksheets will be due at the end of your lab each week, unless otherwise announced by your lab instructor. You **must** attend every lab and workday and turn in **all** the reports.

<table>
<thead>
<tr>
<th>Date</th>
<th>Lecture Schedule</th>
<th>Lab Schedule</th>
<th>Due Assignments</th>
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</thead>
<tbody>
<tr>
<td>8/22-8/26</td>
<td>Intro</td>
<td>Roll call</td>
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<tr>
<td>8/29-9/2</td>
<td>Chapter 1</td>
<td>attendance and safety discussion</td>
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<tr>
<td>9/5-9/9</td>
<td>Chapter 1,2</td>
<td>check in and safety quiz*</td>
<td>Quiz 1 (due on 9/18)</td>
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<tr>
<td>9/12-9/16</td>
<td>Chapter 2</td>
<td>Exp: Density and Specific Gravity (31)</td>
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<tr>
<td>9/19-9/23</td>
<td>Chapter 3</td>
<td>Exp: Atoms and Elements (53)</td>
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<tr>
<td>9/26-9/30</td>
<td>Chapter 3</td>
<td>Exp: Electron Configuration and Periodic Properties (63)</td>
<td>Quiz 2 (due on 10/2)</td>
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<tr>
<td>10/3-10/7</td>
<td>Chapter 5</td>
<td>Work day: exam I review, term-paper discussion and sign up for topics</td>
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<tr>
<td>10/10-10/14</td>
<td>Exam I(Chap 1-3)</td>
<td>Exp: Compounds and their Bonds-part 1 (73)</td>
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<tr>
<td>10/17-10/21</td>
<td>Chapter 5,6</td>
<td>Exp: Compounds and their Bonds-part 2</td>
<td>Quiz 3 due on 10/23</td>
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<tr>
<td>10/24-10/28</td>
<td>Chapter 6</td>
<td>Exp: chemical reactions and quantities (87)</td>
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<tr>
<td>10/31-11/4</td>
<td>Chapter 6,8</td>
<td>Work day: exam II review, independent project discussion and assigning concentrations</td>
<td>Quiz 4 due on 11/3</td>
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<tr>
<td>11/7-11/11</td>
<td>Exam II(Chap 5-6,8,3)</td>
<td>Exp: Moles and Chemical Formulas (97)**</td>
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<tr>
<td>11/14-11/18</td>
<td>Chapter 9,10</td>
<td>Exp: Acid/Base Titration (129)</td>
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<tr>
<td>11/21-11/25</td>
<td>Chapter 10</td>
<td>No labs</td>
<td>Term-paper*** Quiz 5 due on 11/27</td>
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<tr>
<td>11/28-12/2</td>
<td>Chapter 10</td>
<td>Exp: Acids, Bases, pH and Buffers (119)</td>
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<tr>
<td>12/5-12/9</td>
<td>Review</td>
<td>Lab check out</td>
<td>Independent Report*** Quiz 6 due on 12/11</td>
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<td>12/12-12/16</td>
<td>Last week of class</td>
<td>Final Exam: 12/16 2:45 – 5:00 pm, MD-101 (All chapters covered)</td>
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*Mon Sept 5- Labor Day, campus is closed, so Monday labs will check in and take the safety quiz the following Monday (Sept 8th), on the same day that they are doing the Density Experiment.

**Fri Nov 11th-Veterans Day, campus is closed, so Friday labs must attend a different lab that week to complete the experiment. More information will be given.

***Term-paper must be turned in to your lab instructor at the beginning of your lab during the week of Nov 21st.

**** Independent Lab Report must be turned in to your lab instructor at the beginning of your lab during the week of Dec 15th.

Note: Lab reports and worksheets will be due at the end of your lab each week, unless otherwise announced by your lab instructor. You **must** attend every lab and workday and turn in **all** the reports.