Chemistry 1C Sec 01 & 02 Spring 21

Course times: Lecture: MW 4:30-5:45 PM Lab 01 & 02: MW time to be determined

Instructor: John Cihonski, e-mail: cihonskijohn@fhda.edu

Office Hours: After Lecture/Lab meeting – as needed

General:

Course Goal: Under the current restrictive conditions provide a Chem 1C course with sufficient content so that those in the sciences can succeed academically – under safe physical conditions. It is also a *personal* goal for you to understand the course materials and be able to solve problems (apply) using this understanding.

Chemistry 1C will focus on the following topics:

Chapter 13 Mixtures and Solutions
Chapter 19 Ionic Equilibria
Chapter 21 Electrochemistry
Chapter 23 Transition Metals and Coordination Compounds

Approach to this on-line course:

- *Canvas* – We *will not be relying on Canvas* in this course. We will be relying on Zoom, My Portal and De Anza email for communication and pdf support.

- *Textbook* Silberberg, 8e (or 9e). Read the recommended sections and work the in text example problems including the example follow-up problems labeled A & B. For adequate mastery of the material insure that you can work these problems without looking at hints or solutions. If your copy is not the 8th then you should share a copy or obtain a pdf of the homework from a friend who has an 8e. (See homework – below)

- *Lectures* After reading the recommended text material watch the on-line lectures (and take photos of the slides and worked examples for personal use if you find them useful). The material is similar to the text. Access to the Zoom videos is easy. See the example below:

Lecture	Chapter 13 Solution Related
T1 P1	Topic: Lecture material to be covered
	Sign in code for Zoom lecture – cut & paste entire code into your browser

T1 P1 means Topic 1 and Part 1

You should also be able to solve the on slide questions (labeled as "Q" in red), they are similar to the text and homework and they will be the main focus for the exams. Think of the lectures as being your 'Exam Study Guide." As a follow up to the on-line lectures we will periodically do open discussion sessions to answer questions related to the lectures and homework. Timing and frequency - to be determined.

- *Homework (HW)* is from the text (Silberberg 8e). The homework shouldn't be difficult assuming you have read the text, studied the in-text examples and did the lectures. Your homework will be submitted as a *handwritten* based pdf at select times for grading. *Typed copies of the homework will not be accepted.* Since most answers are provided in the back of the text I will be looking for three things: (1) at a minimum you attempt every problem, (2) that your work is legible and coherent (meaning that I can read and follow it) and (3) that you *show your work* (justify/support your result) and *explain* your reasoning. Your homework will be graded as either *acceptable* or *unacceptable*. See extra credit, XC, below.

- *Laboratory Experiments (LE)* The laboratory effort will have two parts:

    - Part A – (Mandatory, value: 25 pts/experiment) – We will use Hands on Labs (HOL) lab kits to study and apply the theory for select text topics. Each lab will focus on a defined topic and your written report should demonstrate that you have learned the concepts, made a professional record of the experiment and wrote a short, focused formal synopsis or summary for "management."

    - Part B – (Extra Credit (XC) –See next section below) In this part we will address open ended application problems (open ended here implies more than one correct approach and/or answer to the problem is possible) *related to what we studied in Part A* and it may or may not include additional lab work.

  The class will be assigned the same problem and you are free to discuss the problem with each other. However, everyone is responsible for their personal *independent* experimental and write up efforts. These lab problems present an opportunity to demonstrate that you can break a problem down into simple steps and that you can provide a rational, reasonable and meaningful solution. Your report should be a rational, coherent, readable and independently written description of your effort. Your report should include calculations or example calculations as necessary. ***An example report will be provided and discussed in class prior to the first experiment***. Think of this from more of a job or internship perspective than a classroom situation. LE grading for Part A will be on a 0, 5, 15, 20 or 25 pt basis.

- *Extra Credit (XC)* See a short description of Part B above. The Part B experiment and its write up will be included in the Part A written report. The report format will be similar to that used for Part A for consistence and ease of reporting. Grading of Part B will be on a 5 pts/experiment basis. Each of the three Part 2 XC's will be graded on a 0, 1, 3, 5 point basis assuming you qualify for the XC – meaning you completed your HW with an acceptable rating. Your XC points are a combination of the number of acceptable HW's and the number of XC points you receive. Assume you did 2 of the 4 HWs and you received a 5, 1 and 3 on the XCs – then the points that will apply to your grade are: (2 HW/4 Possible HW) x (5 + 1 + 3 pts) = 4.5 pts applied to your final average.

- *Exams* There will be two (2) exams - A mid-term covering the first two chapters and a final that will only cover the last two chapters. Exam specifics will be discussed further at the appropriate time but be aware that lab related questions/problems are fair game on the exams.

- *Plagiarism* is presenting someone else's work or idea as your own. This is a common occurrence and it will not be tolerated. If caught you will be given a "0" for the assignment and you will be *further penalized the same number of points as the assignment is worth*. E.g. if the assignment is worth 25 points then a penalty score of -25 will be awarded for plagiarism.

Grading:

Exams (Mid-term + Final) (2 x 100 pts)	200
Lab problems (3 x 25 pts)	75
Home Work (Acceptable or Unacceptable)	--
Total Points:	275

Instructor Optional Extra Credit (XC):	
Possible XC for Acceptable Chapter HW	3 x 5 pts = 15 pts max or 5.5%

Grading: A (100-92%), B (91^{+}-80), C (79^{+}-65), D (64^{+}-55)

Quarter Calendar: Chem 1C Spring 21

Estimated project start and due dates are indicated. Due dates will be modified if necessary.

Week of:	Monday	Wednesday
Wk-1 Apr 04	Course Intro & Start C13 *Provide C13 Assignment Sheet (Lecture & HW)*	General Daily Schedule: 4:30-5:45 PM Sec 01 & 02 – Lecture & Lab related discussions, ~5 min break – Office hour
Wk-2 Apr 11	Discuss LE + XC in general *Provide LE sample report*	Do C13 lecture slide & HW Q&A
Wk-3 Apr 18	Start C19 *Provide C19 Assignment Sheet (Lecture & HW)* **C13 HW due (see "email" info. below)**	*Provide C13 LE + XC pdf & do intro*
Wk-4 Apr 25		Do C19 lecture slide & HW Q&A
Wk-5 May 02	C13 LE + XC Q & A or "help session" **C19 HW due**	**C13 LE & XC report due Sat May 8th by midnight**
Wk-6 May 09	*Provide C19 LE + XC pdf & do intro* Wrap up & review for Exam 1	Grade check **Exam 1 (E1)** – will discuss specifics prior to exam on C13 & C19
Wk-7 May 16	Start C21 *Provide C21 Assignment Sheet (Lecture & HW)*	E1 Grade results + short Exam review
Wk-8 May 23	C19 LP + XC Q & A or "help session"	Start C23 *Provide C23 Assignment Sheet (Lecture & HW)* **C19 LE & XC report due Sat May 29th by midnight**
Wk-9 May 30	**Holiday** **C21 HW due**	Do C21 lecture slide & HW Q&A *Provide C21 LE + XC pdf & do intro*
Wk-10 Jun 06	C23 lecture slide & HW Q&A	C21 LP + XC Q & A or "help session"
Wk-11 Jun 13	**C23 HW due**	C21 & C23 Slide Q&A/Exam 2 review **C21 LE & XC report due on Sat June 1 by midnight**
Wk-12 Jun 20	Grade Check before E2 **Exam 2** – discuss specifics	After E2 is graded – provide E2 and final grade *on an individual basis*

Email addresses for HW, LP, Exam & XC submissions (Note: Section dependent):

Section 61 use : jcihonski@juno.com Section 62 use: jlcihonski@juno.com

Use the correct email for document submission. The wrong address will be treated as being late – a penalty.

There is a 20%/day late penalty on all assignments (HW, LPs, Exams & XCs) assessed based on the email time they are received. Example, if an exam is due by 6 PM of a certain day then an email received after 6 PM that day is considered to be one day late and the clock restarts at midnight.

Student Learning Outcome(s):

*Apply the principles of equilibrium and thermodynamics to electrochemical systems.

*Apply the principles of transition metail chemistry to predict outcomes of chemical reactions and physical properties.

*Evaluate isotopic decay pathways.

*Demonstrate a knowledge of intermolecular forces.