C106 Laboratory Schedule & Policies for Spring 2022

Instructor: Tony Timerman, Ph.D. (in Biochemistry, 1989)
Office: 414 Chemistry Biology Building (CBB)
e-mail: ttimerma@uwsp.edu

WEEKLY LAB SCHEDULE for C106 Lecture Section 2 (with Dr. Timerman)

Time	Mon	Tue	Wed	Thr	Fri
8 AM		C106.02L1 Lab 1 CBB 236 41001	C106.02L2 Lab 2 CBB 236 41003		
9 AM					
10 AM					
11 AM					
(12 PM)					
1 PM					
2 PM		C106.02L3 Lab 3 CBB 236 (Dr Lawrence) 41005	C106.02L4 Lab 4 CBB 236 (Dr. Cole) 41007		
3 PM					
4 PM					

Lab-flow enrollment codes are the **5-digit numbers in red** for lab sections 1-4 (that is, your lab-flow enrollment code is either **41001, 41003, 41005, or 41007**).

COURSE OBJECTIVES:

The C106 laboratory is designed to introduce students to:

1. General laboratory & chemical safety.
2. Proper use of common laboratory glassware & instruments.
3. Provide hands-on working examples of lecture related concepts &skills, specifically:
   - Correlation of Intermolecular Forces with properties of liquids & aqueous solutions
   - Chemical Kinetics
   - General Equilibrium
   - Equilibrium applications in acid-base reactions & pH buffers.
   - Thermodynamic applications in Redox reactions (flashlight batteries)

REQUIRED MATERIALS:

1. **Approved Safety goggles!**
2. **An acceptable MASK (no exceptions will be tolerated)!**
3. **Lab-Flow Registration: "Lab-Flow"** is the electronic learning management system (LMS) that UWSP has contracted with for lab instructions, informational videos as well as partial assessment of electronically submitted lab reports. You can purchase lab flow enrollment either through the bookstore or directly from Lab Flow. The direct purchase option will save you some money but has a more restricted return policy than a bookstore purchase.
4. **Electronic Calculator** again, an inexpensive calculator like a TI-30 is sufficient. Unlike midterm exams, you may use the calculator function on your cell phone during lab. I encourage you to use other features of you phone for help during lab.

WEEKLY LAB-FLOW PROCEDURES

Before the start of each lab:

1. Print a hardcopy of the lab instructions & data sheets (provided as a pdf document in the lab menu). Be sure to bring this copy to lab.

2. Observe ALL **informational videos** in the lab menu (take notes?).

3. Complete & submit an online **pre-laboratory quiz** related to the video content. You are allowed two attempts on each quiz (but you can stop after the first attempt). The highest score of the two attempts is (eventually) posted in the course gradebook (on CANVAS). All prelab quizzes have a maximum value of 10 points.

During & after each lab:

1. Follow the instructions provided by your instructor & outlined in your copy of the lab exercise.

2. Record all observations, measurements, calculations, and follow-up questions in the spaces provided on **data sheets** provided in your copy of the lab instructions. Make sure everything is recorded clearly & legibly in black or blue ink!

3. You may leave the lab after recording all necessary observations & measurements then complete all calculations & follow-up questions outside of the lab.

4. **Significant Figures & Units**: Be sure that all measurements & calculations are reported with proper units and number of significant figures allowed based upon the precision of instrument(s) used. Hint: review C105 material related to significant figures allowed in measurements and calculations!

5. Once the **data sheets** are completed, make an electronic image (photograph) of EACH PAGE using the camera of your mobile phone.

6. Open the **electronic lab report form** found in the lab exercise menu. Transfer the information from your completed data sheets into the electronic lab report form. Do not forget to upload the photograph(s) of your completed data sheets.

7. *I reserve the right to reject any report (zero points) if these images are missing, uploaded sideways/upside down vs right-side up, or otherwise not legible.*

Labflow Points vs. CANVAS Gradebook Points

The lab portion of your grade in C106 has the following components:

- **1x Lab Safety quiz for 20 points.**
- **12x prelab quizzes for 10 points each (120 points total)**.
- **13x lab reports for 10 points each (130 points total).**
- In this manner, each week of lab activity accounts for **20 points** for **270 total points**.

NOTE: There is a difference between the absolute point values of prelab quizzes and lab reports assigned by Labflow vs. the points awarded towards your letter grade on CANVAS. For example, Labflow might assign 50 pts to some reports but 100 pts to others. Unfortunately, I then need to convert the percentage of lab flow points earned to a score relative to a 10 point maximum and transfer these scoress to the CANVAS gradebook. This process takes some time on my part so please be patient as your lab results will not immediately show up on the course CANVAS page. I often transfer two weeks of labs at a time from Labflow to Canvas simply because it takes about the same amount of time to transfer two labs at a time vs. one lab (cutting my time in half).

Due Dates for Pre-Lab Quizzes (10 pts) & Lab-Reports (10 pts):

A. The deadline for each WEEKLY **pre-lab quiz** is **Monday at Midnight** for all four lab sections.

B. The deadline for each WEEKLY **lab-report** is **Friday at Midnight** for all four lab sections.

Time Extensions?

- Prelab quizzes must be completed prior to lab, therefore time extensions cannot be granted for prelab quizzes.
- Each time extension granted for a lab report forces me to delay the start of grading all lab reports (and delay transferring lab scores to CANVAS). For this reason, I reserve the right to deduct the score of any late report by as much as 50% (especially for students that routinely ask for more time).

Electronic Grading of Lab Reports

- The Labflow program has an algorithm that evaluates and grades most (but not all) of the responses and questions on each lab report. These algorithms often result in double jeopardy by marking points off more than once for a repeated error. In these cases, I will do my best to add points back to a report. Likewise, the algorithms also miss blatant errors on issues like significant figures and I will deduct additional points from those reports.
- I will do my best to clarify any point adjustment via comments on your graded report. You can read these comments after your report is graded and posted in the Labflow gradebook.
- At the end of the day, do not hesitate to ask me for clarification about the grading of a lab report.

C106 Laboratory Spring 2022: Weekly Checklists & Due-Dates

Week	Title of Lab Exercise	Copy PDF?	Watch Videos?	Prelab Quiz Due date	Report Due Date
1	Check-In, Lab Safety Videos & Safety Quiz	N/A	N/A	**1/31/22**	N/A
2	#1 Modeling, geometry & polarity		N/A	N/A	**2/04/22**
3	#2 IMF Lab (IMF's & liquid evaporation rate)			**2/07/22**	**2/11/22**
4	#3 Solutions, electrolytes, & concentrations			**2/14/22**	**2/18/22**
5	#4 MW from freezing point depression			**2/21/22**	**2/25/22**
6	#5 Glassware, techniques & measurements			**2/28/22**	**3/04/22**
7	#6 Iodine clock reaction (by table of initial rates)			**3/07/22**	**3/11/22**
8	#7 LeChateliers Principle (in general equilibrium)			**3/14/22**	**3/18/22**
SPRING BREAK SPRING BREAK SPRING BREAK					
9	#8 Volumetric Analysis (% of acid by titration)			**3/28/22**	**4/01/22**
10	#9 Amount of NaOCl in bleach (by redox titration)			**4/04/22**	**4/08/22**
11	#10 Determination of a Ksp (solid $Ca(OH)_2$ in water)			**4/11/22**	**4/15/22**
12	#11 pH titration of a diprotic acid			**4/18/22**	**4/22/22**
13	#12 pH Buffers: preparation and properties			**4/25/22**	**4/29/22**
14	#13 Voltaic cell (thermodynamics of batteries)			**5/02/22**	**5/06/22**
15	Check-out				