

The policies below, and on Dr. Bowling's "Chem 326 Laboratory Course, Spring 2021" Canvas page, are specific to the Chem 326 Laboratory course. Please see Dr. Tanke's syllabus and Canvas page for policies and due dates for the Chem 326 Lecture Course.

**A. Getting Starting: What do you need to do before the first week of classes?**

1. **Purchase Labflow software and enroll in the labflow course.** Purchasing the software from the bookstore has some advantages in that you can charge it to your student account and return it if there are any problems. If you would rather take your chances and save a little money, you can purchase it directly from the vendor. Use your section code when you enroll so the program recognizes what lab section you are in (see labflow information later in syllabus for more info).
2. **Purchase goggles,** if you do not already own some. You will need to bring your goggles with you every week, including the first week (Check in).
3. **Purchase a laboratory notebook.** This doesn't have to be anything fancy since you will only be scanning your notebook pages and submitting these scans on Canvas. However, I would recommend having a dedicated notebook for this course. A previously used lab notebook with lots of leftover blank pages should suffice if you have one from a previous class.

**B. Week-to-week: What should you be looking for on the Canvas page each week?**

1. **Labflow quiz.** You will be expected to watch videos in labflow and complete a prelab quiz almost every week. Your labflow quiz must be submitted before your lab period for that week starts in order for you to earn credit.
2. **Notebook prep.** You will be required to submit scans of your notebook in Canvas almost every week. **Keep a close eye on due dates!** Because notebook submissions will sometimes be things you are supposed to have in your notebook before you come to lab and sometimes will be things you are supposed to put in your notebook as you are in lab, or after you leave lab, the due dates for these assignments will vary.
3. **Procedure.** You are required to have access to a laboratory procedure (i.e. instructions) every week you come to lab. These will be posted in Canvas in each weekly module. Ideally, you would have these printed out. However, if you can read the directions directly off of the Canvas site with a computer or phone, that is acceptable. **Caution: every time you pick up your phone or touch your computer in the laboratory, you are potentially transferring laboratory chemicals to the surface.** Because phones and computers are very difficult to clean when you leave the lab—for your health and safety—we recommend paper printouts that can be placed in a garbage or recycling container when you leave.
4. **Report/Peer Review.** After each two, three, or four week experiment, you will be part of a group that submits a formal lab report. One of these reports is a typical group report, submitted by everyone. However, for three of the reports, responsibilities will be divided. One person will be in charge of writing the report, and the rest of the group members will be tasked with reviewing the report via the Peer Review function in Canvas. Each student will only be tasked with being the author one time during the semester. **Keep a close eye on due dates!** Due dates for authors and reviewers will be different for each report.

**C. Attendance:** Attendance at laboratory sessions is required. Make-up labs may be allowed at the instructor's discretion. Absences are only *excused* if approved by the instructor. If you do not contact the instructor either before or during your scheduled lab session, your absence will be *unexcused*. Students with more than one *unexcused* absence over the course of the semester will receive a failing grade in Chem 326. Coming late to a laboratory session will be treated as an *unexcused* absence.

**What if you are not feeling well, in quarantine, or have an important conflict (e.g. funeral, UWSP athletic commitment, etc.)?**

1. **If you are not feeling well**, you should not come to lab. Contact me via email ASAP to come up with a plan for making up the work in-person at a later time. Once you contact me, this is an *excused* absence. While this, technically, has always been my approach, it is very important that we all comply as we face this pandemic. Though in a normal year you might attend lab if you had a headache or a minor cough, you absolutely should not come to lab if you have these or other symptoms.

2. **If you have to quarantine due to COVID-19 exposure**, do not come to lab, and contact me via email ASAP to come up with a plan for making up the work in-person at a later time. Once you contact me, this is an *excused* absence. This semester, we will be treating all absences as we have historically, regardless of whether they are pandemic related. If you have to miss a lab or two for any reason, we will work together to figure out a way for you to make that work up during a later lab period.

3. **If you have a scheduled conflict**, you need to let me know at least a week in advance, when possible. Once you contact me, this is an *excused* absence. Obviously, if you have an unexpected conflict, such as a funeral, you will not be able to let me know one week in advance. In these rare cases, be sure to email me as soon as you know you are going to have to miss lab so we can plan for you to make up the work in-person.

**D. In what ways will this semester be different from normal semesters?**

1. **COVID safety protocols** will be in place. You need to wear your face covering the entire time you are in the laboratory. You will be expected to socially distance from others in the lab. You will be expected to wipe down your work surfaces with disinfecting wipes before and after you work on them.

2. **Flexibility** will be less than Fall 2020. As we all were adjusting to the pandemic, faculty were trying to be very flexible with due dates, etc. In most cases, this backfired. Nearly every student who requested frequent due date adjustments failed Chem 325. In an effort to support healthy study habits and not enable unhealthy ones, we will be enforcing laboratory due dates as you might expect in a normal semester. Late work will be either not accepted or accepted at reduced credit. However, ***if you are struggling to keep up, please reach out to us!*** We truly want to help you when we can.

3. **The lab schedule** will be a little lighter than a normal semester. We have intentionally built an extra week into every experiment so when people's semesters are interrupted by COVID quarantine, they will still have time to complete most or all of their experiments. Students who complete their experiment in the "normal" amount of time will have a one week break from coming to lab between each experiment. During the week "off," students will be required to meet via Zoom to discuss their lab reports.

### E. Labflow signup instructions

Once you purchase the software from the bookstore or the vendor, you will need to enroll online (see accompanying PDF for instructions). In this process, you will need to input your section code (Table 1)

**Table 1. Section information for labflow**

Section Code	Lab Section	Lab Time	Lab Instructor
40779	O2L1-LAB	Tuesday, 11am-1:50pm	Dr. Bowling
40780	O2L2-LAB	Thursday, 11am-1:50pm	Dr. Tanke
40781	O2L3-LAB	Wednesday, 2pm-4:50pm	Dr. Tanke
42364	O2L4-LAB	Wednesday, 8am-10:50am	Dr. Bowling

### F. Course Schedule

Week		Responsibilities	Experiment
1	Jan. 25-29	<b>Pre-lab:</b> Review lab syllabus and take syllabus quiz. <b>Pre-lab:</b> Watch videos on labflow. Take pre-lab quiz. <b>During:</b> Follow instructions from instructor. <b>Post-lab:</b> No post-lab responsibilities	Check-in/safety
2	Feb. 1-5	<b>Pre-lab:</b> Watch videos on labflow. Take pre-lab quiz. <b>Pre-lab:</b> Submit scans of prepared notebook. <b>During:</b> Have printouts or access to Procedure: Reduction of Benzoin, Week #1. <b>Post-lab:</b> No post-lab responsibilities	Reduction Benzoin #1
3	Feb. 8-12	<b>Pre-lab:</b> Watch videos on labflow. Take pre-lab quiz. <b>Pre-lab:</b> Submit scans of prepared notebook and hand-written procedure from Week #1. <b>During:</b> Have printouts or access to Procedure: Reduction of Benzoin, Week #2. <b>Post-lab:</b> No post-lab responsibilities	Reduction Benzoin #2
4	Feb. 15-19	<b>Pre-lab:</b> Watch videos on labflow. Take pre-lab quiz. <b>During:</b> Have printouts or access to Procedure: Reduction of Benzoin, Week #3. <b>Post-lab:</b> Submit scans of hand-written procedure and questions. <b>Post-lab:</b> Upload first draft of lab report, author #1 <b>Post-lab:</b> Peer review of author #1's first draft	Reduction Benzoin #3
5	Feb. 22-26	<b>Pre-lab:</b> No pre-lab responsibilities <b>During:</b> Meet with lab report group via Zoom. Record meeting and upload to Canvas. <b>Post-lab:</b> Upload final draft of lab report, author #1	Zoom: Benzoin Report

6	Mar. 1-5	<p><b>Pre-lab:</b> Watch videos on labflow. Take pre-lab quiz.</p> <p><b>Pre-lab:</b> Submit scans of prepared notebook.</p> <p><b>During:</b> Have printouts or access to Procedure: Unknown Esters, Week #1.</p> <p><b>Post-lab:</b> No post-lab responsibilities</p>	Unknown esters #1
7	Mar. 8-12	<p><b>Pre-lab:</b> Watch videos on labflow. Take pre-lab quiz.</p> <p><b>During:</b> Have printouts or access to Procedure: Unknown Esters, Week #1.</p> <p><b>Post-lab:</b> Submit scans of hand-written procedure and questions.</p>	Unknown esters #2
8	Mar. 15-19	<p><b>Pre-lab:</b> No pre-lab responsibilities</p> <p><b>During:</b> Meet with lab report group via Zoom.</p> <p><b>Post-lab:</b> Upload group report to Canvas, whole group</p>	Zoom: Unknown Esters Report
9	Mar. 29-Apr. 2	<p><b>Pre-lab:</b> Watch videos on labflow. Take pre-lab quiz.</p> <p><b>Pre-lab:</b> Submit scans of prepared notebook.</p> <p><b>During:</b> Have printouts or access to Procedure: Essential Oils, Week #1.</p> <p><b>Post-lab:</b> No post-lab responsibilities</p>	Essential Oils #1
10	Apr. 5-9	<p><b>Pre-lab:</b> Watch videos on labflow.</p> <p><b>During:</b> Have printouts or access to Procedure: Essential Oils, Week #2.</p> <p><b>Post-lab:</b> Submit scans of hand-written procedure and questions.</p> <p><b>Post-lab:</b> Upload first draft of lab report, author #2</p> <p><b>Post-lab:</b> Peer review of author #2's first draft</p>	Essential Oils #2
11	Apr. 12-16	<p><b>Pre-lab:</b> No pre-lab responsibilities</p> <p><b>During:</b> Meet with lab report group via Zoom. Record meeting and upload to Canvas.</p> <p><b>Post-lab:</b> Upload final draft of lab report, author #2</p>	Zoom: Essential Oils report
12	Apr. 19-23	<p><b>Pre-lab:</b> Watch videos on labflow.</p> <p><b>Pre-lab:</b> Submit scans of prepared notebook.</p> <p><b>During:</b> Have printouts or access to Procedure: Acetylferrocene, Week #1.</p> <p><b>Post-lab:</b> No post-lab responsibilities</p>	Acetylferrocene #1
13	Apr. 26-30	<p><b>Pre-lab:</b> Watch videos on labflow.</p> <p><b>During:</b> Have printouts or access to Procedure: Acetylferrocene, Week #2.</p> <p><b>Post-lab:</b> Submit scans of hand-written procedure and questions.</p> <p><b>Post-lab:</b> Upload first draft of lab report, author #3</p> <p><b>Post-lab:</b> Peer review of author #3's first draft</p>	Acetylferrocene #2
14	May 3-7	<p><b>Pre-lab:</b> No pre-lab responsibilities</p> <p><b>During:</b> Meet with lab report group via Zoom. Record meeting and upload to Canvas.</p> <p><b>Post-lab:</b> Upload final draft of lab report, author #3</p>	Zoom: Acetylferrocene report
15	May 10-14	<p><b>During:</b> Follow instructions from instructor.</p>	Check out

### G. Grading

The grade you earn in Chem 326 will be a weighted average of your grade in the lecture course and your grade in the lab course. Because this is a weighted average, 1 pt in lab is not equal to 1 pt in lecture. Dr. Tanke and Dr. Bowling will calculate grades at the end of the semester based roughly on the idea that 75% of your grade will be from lecture, and 25% will be from lab.

Experiment	Points Possible for Each Experiment
Check-In/Safety/Syllabus	10 pts
Reduction of Benzoin	60 pts
Unknown Esters	50 pts
Essential Oils	45 pts
Acetylferrocene	40 pts
Total	205 pts

### H. Cheating and Academic Misconduct

Submitting work that has been copied from a classmate, a former student, or an online resource is cheating, and will be treated as academic misconduct. Students who have participated in academic misconduct will receive a failing grade in Chem 326 (the entire 4 credit course, not just the lab), and may be subject to further disciplinary actions at the University level according to Ch. 14 of the student rights and responsibilities handbook (<https://www.uwsp.edu/dos/Documents/UWSP14-Final2019.pdf>).

### I. Sources of Information

For most experiments, you will be required to look up information about chemicals you are going to use. Generic web searches will generally get you the correct information. As with all web searches, some sources are more reliable than others. Two reputable websites for this purpose are:

- a. [www.chemspider.com](http://www.chemspider.com)
- b. [www.sigmaaldrich.com](http://www.sigmaaldrich.com)

## J. Safety and Best Practices

Safety in the laboratory is very important. Organic chemicals are often flammable and hazardous. You are encouraged to work in the hoods as much as possible. Specific safety requirements include:

1. **Safety goggles must be worn over the eyes** whenever anyone is handling chemicals in the lab. This includes the seated area.
2. **Close-toed shoes must be worn in the lab.**
3. It is best practice to wear clothing that covers as much skin as possible. Shorts, short sleeve shirts or blouses, etc. permit the possibility of chemicals coming into contact with your bare skin. Either wear "covering" clothing or purchase a lab apron or lab coat. Use gloves when advised or whenever you feel you need to protect your hands.
4. **Perform chemical operations in the hood.**
5. **Come to class prepared** and ask questions.
6. **You may not work in the laboratory outside of the normal class** without permission.
7. **Keep your work area and common work areas clean.** Wash or sanitize your hands before and after using common equipment (like balances, reagent bottles, etc).
8. **Report all accidents and spills**, however minor. All powders must be disposed in hazardous or non-hazardous waste containers; loose powder in the trash is unacceptable.
9. **Neither food nor drink are allowed in the laboratory**; this includes the seating area. Should you need to leave the lab make sure any heating source is turned off and let those you pass know you are walking by. Restrooms are across from the elevators and you may fill water bottles at the "filling station" if you need a drink. Water bottles may be kept in the entryway cubbies, but you need to take them into the hallway when drinking.
10. **Headphones or earbuds are not to be used in the lab.** Distractions from phone use lead to accidents. If you must use your phone for personal use (texting included) secure the work area and move out of the lab.
11. **Read the safety information (MSDS) of each substance that you use.**
12. Anyone with special health considerations (for example pregnancy) should consult with her doctor before participating in this class.
13. Anyone with a pacemaker or known allergies to chemical substances (like latex) should inform their instructor. Please note that we generally use nitrile (not latex) gloves in lab.