

SANTA CLARA UNIVERSITY**SUMMER TERM 2023****SCDI - 2109****INSTRUCTOR**

Dr. Ruhland

Email: bruhland@scu.edu**Office:** SCDI 2117-2**SECTIONS, INSTRUCTOR, DAY, TIME and ROOM**

Section #	Instructor	Day	Time	SCDI - Room #
62022	Ruhland	Monday & Wednesday	8:00 - 12:30	2109
62548	Ruhland	Tuesday & Thursday	8:00 - 12:30	2109

MATERIALS REQUIRED:

Personal protective equipment. These items are available for purchase at the bookstore.

1. Safety goggles



2. Laboratory coat.
3. You will also have to wear the appropriate apparel for working in a teaching laboratory in the Department of Chemistry & Biochemistry at SCU:
 - a. **Laboratory coat**
 - b. **Long pants.**
 - c. **Closed-toe shoes, covering the top of the foot and the heel, ideally with a non-permeable upper component covering the foot.**
4. A device (preferably a laptop computer) that will enable you to access procedures, software, and other resources and to maintain a digital laboratory notebook during the lab meetings. *If you do not have access to a suitable device, please let your instructor know; we'll identify a solution for you.*

5. Textbook: *Laboratory Techniques in Organic Chemistry* by Mohrig, Alberg, Hofmeister, Schatz, and Hammond, 4th Edition. ISBN: 9781464134227

Digital resources we'll use:

1. **Camino.** Laboratory documents, including procedures for experiments, will be accessible on the Camino course page. During the lab, you may choose to bring a printed copy or to access them digitally from a laptop computer. Assigned work will be turned in on Camino. Please check this regularly so you are prepared for the course.
2. **Google Docs.** You will use Google Docs for your digital lab notebook (DLN). More guidelines will be provided with specific instructions for formatting and sharing these documents.

COURSE LEARNING OBJECTIVES:

In this course, students will:

1. Follow experimental procedures to master techniques that are central to organic chemistry reactions, chemical separation and purification, and chemical analysis.
2. Comply with safety expectations in the chemical laboratory, including proper use of personal protective equipment, describing and appreciating hazards of compounds to be handled, mediating risks of procedures, and properly disposing of chemical wastes.
3. Keep detailed records and experimental analyses in a digital laboratory notebook.
4. Work together with a classmate to execute and analyze experiments, when directed.

ATTENDANCE POLICY:

Attendance is expected at every lab meeting, and you are expected to arrive at the lab on time. Most weeks we'll start with a brief lecture, and/or demo.

You should expect to stay for the full duration of our class/lab meeting. If you completed experimental work in the lab, you should begin your lab write-up and/or analysis. Doing this during our lab meeting time will ensure that you can meet with your lab partner(s) and have your questions answered by the instructor and/or TA.

If you have an excused absence (e.g, unavoidable conflict or illness accompanied by an official note), please discuss your situation with your instructor individually as soon as possible. At the discretion of the laboratory instructors, students with excused absences may make up missed work.

Any unexcused absence or two unexcused tardy arrivals (>10 min) will drop your overall lab score by 20%. Two unexcused absences will result in failure of the lab (and therefore failure of the course).

LAB SCHEDULE and ASSIGNMENTS:

Tentative schedule:

The tentative lab schedule below includes due dates for quizzes and DLNs. We may need to adjust plans based on the pacing of the work; please understand that this plan is subject to change.

Week #	Days	Experiment and Assignment	Due date
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Week 1	M, Tu	Check-in lockers; Lab policies and safety; <u>Experiment 1: Thin Layer Chromatography</u>	
		Quiz 1	Week 1: M, Tu
		DLN 1	Week 1: M, Tu
Week 1	W, Th	<u>Experiment 2: Recrystallization of benzoic acid</u>	
		Quiz 2	Week 1: W, Th
		DLN 2	Week 1: W, Th
Week 2	M, Tu	<u>Experiment 3: Steam distillation and liquid-liquid extraction</u>	
		Quiz 3	Week 2: M, Tu
		DLN 3	Week 2: M, Tu
Week 2	W, Th	<u>Experiment 4: Separation of an acid, a base, and a neutral compound</u>	Week 2: W, Th
		Quiz 4	Week 2: W, Th
		DLN 4	Week 2: W, Th
Week 3	M, Tu, W, Th	<u>Experiment 5: Comparing E2 reaction conditions</u>	
		Quiz 5	Week 3: M, Tu
		DLN 5	Week 3: W, Th

PRE-LAB ASSIGNMENTS:

Before coming to the lab you should complete the pre-Lab assignments that are posted on the Camino course page, that include the following:

Reading: Read the procedure and any introductory material, read about the techniques in the textbook

Completing a Quiz: Complete a quiz before each new experiment to ensure that you are prepared for the experiment. Quizzes are set to no time limit but to only one attempt per question. Quizzes have to be submitted **30 minutes** before the start of the lab. Failure to meet this requirement will result in a student not being able to start the experiment and having to leave the laboratory until the quiz is completed. **Late quizzes will incur a 50% per hour late deduction.**

Preparing your DLN: Before each experiment, prepare your DLN by filling in the following sections: Title, Date and Name, Purpose, Chemical Structure (or Chemical equations), Chemical safety table, Physical property table (or Reactant table), and Procedure.

GRADING

The lab is intended to be a developmental experience, and your grade will reflect your effort with an expectation that the quality of your work in the lab, and in your lab notebook will improve over the quarter with regular feedback from your instructor. You are not expected to do everything perfectly in the first week. Rather, you will be assessed on your responsiveness to feedback over the quarter.

You'll be assessed based on your work on the following:

- Preparedness and safety which includes the prelab assignments
- Digital Lab Notebook (DLN):
Your effort and performance will be assessed by your instructor's observation of your execution of experiments and the appropriateness and thoroughness of DLN content. The DLN is the primary record of your work in this course. The goal of the notebook is for another person to be able to repeat the experiment using only what you've written in your notebook. Refer to the Digital notebook guidelines and the grading rubrics posted on the course page before turning in your assignment. Be aware of the late penalties. **Late DLNs will incur a 20% per day late deduction.**

DIGITAL LAB NOTEBOOK (DLN)

Refer to the Digital notebook guidelines which gives details on how to maintain a digital lab notebook (DLN).

ACADEMIC INTEGRITY:

The Academic Integrity pledge is an expression of the University's commitment to fostering an understanding of - and commitment to - a culture of integrity at Santa Clara University. The Academic Integrity pledge, which applies to all students, states:

I am committed to being a person of integrity. As a member of the Santa Clara University community, I pledge to abide by and uphold the standards of academic integrity contained in the Student Conduct Code.

Students are expected to uphold the principles of this pledge for all work in this class. Specific to this class, you may help each other understand and complete various procedures. However, all work recorded in your notebook must be your own. DLNs can be shared with your lab partner but should not be shared electronically with other students unless specified by the instructor. Giving or receiving unauthorized aid in any form can result in course failure. Please see your instructor if you need clarification on what constitutes unauthorized aid or breaches of academic integrity in your work; not understanding what constitutes an academic integrity violation will not be an acceptable excuse. For more information about Santa Clara University's academic integrity pledge and resources about ensuring academic integrity in your work, see www.scu.edu/academic-integrity

Wellness Statement

I encourage you to prioritize taking care of yourself, and I recognize that being a college student can get really stressful and, sometimes, overwhelming. I am here to support you so that you can do your best in this class (and all of your classes). I encourage you to ask for help when you need it. Get plenty of sleep, drink lots of water, move, get outside, and pay attention to beauty that isn't coming to you on a screen. Eat good food; enjoy friends and family; look for opportunities to connect with others in new ways; pray, meditate, or otherwise attend to your spirit.

SCU has many resources and programs to support you. These resources may be especially helpful:

Wellness Center: <https://www.scu.edu/wellness/>

The Wellness center provides resources to aid and promote student well-being across the eight dimensions of wellness, including student peer groups for healthful living, violence prevention, and recovery.

CAPS: <https://www.scu.edu/cowell/counseling-and-psychological-services-caps/>

Santa Clara students are provided confidential counseling sessions at no cost through Counseling and Psychological Services (CAPS). Students have access to clinically appropriate, short-term therapy; group therapy; and other resources for care. A new 24/7 support line is also available: **408-554-5220**.

SCU Culture of Care: <https://www.scu.edu/osl/culture-of-care/>

If you are concerned for the mental or physical welfare of one of your peers, the [Office of Student Life Culture of Care](https://www.scu.edu/osl/culture-of-care/) website provides resources for recognizing and helping someone in distress.

Academic Concerns

If you are concerned with your progress in this class, please contact me so that we can find solutions together. [Drahmann Center](#) can also offer support with issues regarding your academic progress more broadly.

SCU also has multiple options for free academic tutoring. Students can make appointments to discuss work in a range of courses:

- [Drahmann Tutoring](#) (Numerous courses in the College of Arts & Sciences including Natural Sciences, Modern Languages, Economics, and Computer Science)
- [The HUB Writing Center](#) (Writing and Public Speaking)
- [Mathematics Learning Center](#) (MATH 4, 6, 8, 11-14, 30-31, 35-36, 51, 53)

Respect for Diversity

It is my intent that students from all diverse backgrounds and perspectives be well served by this course, that students' learning needs be addressed both in and out of class, and that the diversity that students bring to this class be viewed as a resource, strength and benefit. It is my intent to present materials and activities that are respectful of diversity: gender, sexuality, disability, age, socioeconomic status, ethnicity, race, and culture. Your suggestions are encouraged and appreciated. Please let me know ways to improve the effectiveness of the course for you personally or for other students or student groups. In addition, if any of our class meetings conflict with your religious events, please let me know so that we can make arrangements for you.

Gender Inclusive Language

This course affirms people of all gender expressions and gender identities. If you go by a name different from what is on the class roster, please let me know. Using correct gender pronouns is important to me, so I encourage you to share your pronouns with me and correct me if I make a mistake. If you have any questions or concerns, please do not hesitate to contact me. For more on personal pronouns see www.mypronouns.org

Land Acknowledgment

Santa Clara University occupies the unceded ancestral homeland of the Ohlone and Muwekma Ohlone people.

Discrimination, Harassment, and Sexual Misconduct (Title IX)

Santa Clara University is committed to providing all students with a safe learning environment free of all forms of discrimination, sexual harassment, and sexual violence.

Please know that as a faculty member, California law SB 493 requires me to report any information brought to my attention about incidents of sexual harassment or misconduct to the SCU Equal Opportunity and Title IX Office (408) 551-3043. This includes, but is not limited to, disclosures in writing assignments, class discussions, and one-on-one conversations.

Should you need support, SCU has dedicated staff trained to assist you in navigating campus resources, accessing health and counseling services, providing academic and housing accommodations, helping with legal protective orders, and filing a formal complaint with the University or with law enforcement. Please see the Student Resources page for more information about reporting options and resources.

If you or someone you know has experienced sexual harassment or sexual violence and wishes to speak to a **confidential** resource who is not required to report, please contact one of the following SCU resources for support:

- Bree Van Ness, Assistant Director for Student Survivor Advocacy and Campus Support, SCU Wellness Center, 852 Market St, (408) 551-3307, bvanness@scu.edu
- SCU Wellness Center
- CAPS

- Any individual (clergy, counselors) acting in a professional capacity for which confidentiality is mandated by law

I am happy to help connect you with any of these resources.

Accommodations for Pregnant and Parenting Students

Santa Clara University does not discriminate against any student on the basis of pregnancy or related medical conditions. Absences due to medical conditions relating to pregnancy and childbirth will be excused for as long as deemed medically necessary by a student's doctor, and students will be given the opportunity to make up missed work. Students needing accommodations can often arrange accommodations by working directly with their instructors, supervisors, or departments. Students needing accommodations can also seek assistance with accommodations from the Office of Accessible Education (OAE) or from the Office of Equal Opportunity and Title IX Office. The following link provides information for students and faculty regarding pregnancy rights. <https://www.scu.edu/title-ix/resources/pregnancy/pregnancy>.

Office of Accessible Education

If you have a documented disability for which accommodations may be required in this class, please contact the Office of Accessible Education (oea@scu.edu, <http://www.scu.edu/oea>) as soon as possible to discuss your needs and register for accommodations with the University. If you have already arranged accommodations through OAE, please be sure to request your accommodations through your myOAE portal and discuss them with me during my office hours within the first two weeks of class. To ensure fairness and consistency, individual faculty members are required to receive verification from the Office of Accessible Education before providing accommodations.

Copyright Statement

Materials in this course are protected by United States copyright laws. I am the copyright holder of the materials I create, including notes, handouts, slides, and videos. You may make copies of course materials for your own use and you may share the materials with other students enrolled in this course. You may not publicly distribute the course materials without my written permission.

Technology Support

Although this is an in-person course, you will still need to access technology for course materials (Camino), for communication outside of class (email and Zoom), and for keeping your digital lab notebook (Google Docs). SCU can provide you with technology assistance, and you can also reach out to our providers directly for answers to your questions.

For Camino support, contact caminosupport@scu.edu or call 408-551-3572. You can also use the help button within the Camino platform (on the left hand navigation) for 24/7 support via chat or phone.

For Zoom assistance, contact Media Services at mediaservices@scu.edu or 408-554-4520. You can also get 24/7 support from Zoom by calling 1-888-799-8854

For SCU network and computing support, contact the SCU Technology Help Desk at techdesk@scu.edu or 408-554-5700. They can provide support for MySCU Portal, Duo, ecampus, hardware and software issues, and more.

