

Chemistry 145: Good Quality Practices

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This is primarily an experimental chemistry course. Experiments are specifically designed for those who want to acquire basic knowledge and experimental skills in good quality practices. Through this course, students will learn how to properly acquire, record and analyze data using good quality practices. This includes elements of good laboratory practices, good manufacturing practices, good clinical practices, and good documentation practices. Lecture topics include: Technical writing, peer review, calibration, documentation, standard operating procedures, accreditation, quality assurance, quality control, validation.

Laboratory: Tuesdays and Thursdays 13:10-16:00 (A01); 16:10-19:00 (A02) EPHSCI 2342

Lecture: Fridays 12:10-13:00 (Olson 217)

Textbooks:

Recommended:

Biotechnology: A Laboratory Skills Course by J. Kirk Brown (Hardcover: 313 pages)

Publisher: Bio-Rad Laboratories (2011) ISBN-10: 0983239606 ISBN-13: 978-0983239604

Required (PDF file on Course Site)

Good Quality Practices, Laboratory Manual, CHE 145 Laboratory Manual, University of California, Davis, Department of Chemistry, Revision Winter 2020

Required Materials: Bound laboratory notebook, goggles, and lab coat.

Prerequisite: course CHE129C or CHE118B

Grading:

You will be graded by your performances in the following areas:

-Lab Reports:	60%
-Lab Performance (Pre-Lab preparedness, cleanup, etc.):	10 %
-Presentation:	15%
-Lecture Attendance/Participation:	5%
-Final Exam:	10 %
Total:	100 %

On many assignments, and particularly on the labs, you will be working as a group or with a partner. However, EACH STUDENT must perform the calculations and fill out and hand in their OWN version of each assignment and lab report, except where group submissions are specified. Please review the "Code of Academic Conduct" on the following page and seek more information at <http://sja.ucdavis.edu/cac.html>. If you have any questions, ask the TA or instructor.

Laboratory Performance Dates

Note: Experiments are not performed in numerical order.

Chemistry 145 GQP					Land
Wk	Day	Date	Exp #	Exp Name	
1	Tues	1/9/2024	Check In:	Check in & Orientation, notebook tech writing, Videos Exp 1-2.1	
	Thurs	1/11/2024	Exp 1	Exp 1 Pipetting	
2	Tues	1/16/2024	Exp 2.0	Exp 2.0 Chromatography of grape Kool-Aid	
		1/16/2024	Exp 2.1	Exp 2.1 DNA Extraction & PPT	
	Thurs	1/18/2024	Exp 5	Exp 5 Prepare & Titration NaOH	
3	Tues	1/23/2024	Exp 6	Exp 6 Test Essential oils & Fats (Standards)	
	Thurs	1/25/2024	Exp 6	Exp 6 Test Essential oils & Fats (Standards)	
4	Tues	1/30/2024	Exp 7	Exp 7 Planning Scheduling & C.O.C	
	Thurs	2/1/2024	Exp 8	Exp 8 Essential Oils Extraction (individual)	
5	Tues	2/6/2024	Exp 10	Exp 10 Soaps (small scale, individual)	
	Thurs	2/8/2024	Exp 9	Exp 9 QC Test (group)	
6	Tues	2/13/2024	Exp 9	Exp 9 QC Test & Sign off (group)	
	Thurs	2/15/2024	Exp 11	Exp 11 SOPs (Soap, Lg Scale) & QA sign off (groups)	
7	Tues	2/20/2024	Exp 12	Exp 12 Soaps (large scale, groups)	
	Thurs	2/22/2024	Exp 12	Exp 12 Soaps (large scale, groups)	
8	Tues	2/27/2024	Exp 3	Exp 3 Prepare LB Agar & Plates	
	Thurs	2/29/2024	Exp 4	Exp 4 Disk Diffusion Test	
9	Tues	3/5/2024	TBD	TBD	
	Thurs	3/7/2024	Exp 12	Exp 13 QC Test Product (Soap) (groups)	
10	Tues	3/12/2024	Exp 13	Exp 14 QA Review & Release (groups)	
	Thurs	3/14/2024	Exp 14	Presentation	
F	12:10 PM	1:00 PM		Class	

(See due dates under “Assignments” on course site.)