

# Fall 2012 CH153K Physical Chemistry Laboratory Syllabus

This syllabus applies to unique numbers 52075, 52080, 52085, 52090, 52095, 52100, 52103, 52105, and 52112.

## Lab personnel

Robb Wilson, Alan Campion ..... Lab Director, Course Instructor  
Angie Steelman/Aaron Bluhm/Jon Nielson/ ..... Stockroom Staff

## Lab sessions

M 9am-12pm, M,T,W,Th: 2-5pm, M, T, W, Th: 7-10pm..... Ph: 475-6182, WEL 4.138

Attend one lab session per week. See the lab manual for more detailed schedule information.

## Office hours

All TA office hours are held in WEL 4.136. Times are posted at the end of this syllabus, by the lab and on our website. Do not disturb your TA outside office hours, except by appointment. The Lab Director's and Course Instructor's office hours are by appointment.

## Prerequisites

CH353(M) and its prerequisites: CH302, 6 hours of calculus, & your 2<sup>nd</sup> physics lecture and lab.

## Course overview

1. This course offers a variety of experiments designed to help you:
  - **learn data techniques,**
  - **learn error analysis techniques,**
  - **communicate your work to other scientists**
  - receive an introduction to basic experimental methods of physical chemistry,
  - apply various theories important in physical chemistry to the collected data,
  - compare results with literature values,
  - think about the meanings of the underlying theory and the answers obtained.
2. Experimental emphasis is on measurements of thermodynamic, kinetic, and physical properties and are run in round-robin fashion.

## Course materials

- CH153K lab manual, available on Bb>Master Ch153K Course> Course Documents
- C.W. Garland, J.W. Nibler and D.P. Shoemaker, Experiments in Physical Chemistry, any edition (If 8<sup>th</sup>, get the UT Custom edition)
- Lab notebook with duplicate numbered pages, we recommend buying from ACS in the Grand Hall.

## Attendance

You are expected to be on time and attend every lab session. Due to our open scheduling system, there are no specific make-up dates. You are also required to take a full two sessions for each experiment. If you have finished the in-lab portion, work on your data analysis or report writing in the computer lab.

## Computers

- Computers are provided in the lab where needed for experimentation, and in our computer room (WEL 4.136) for analysis. All labs have wireless access.
- We will use Blackboard <http://courses.utexas.edu/>, where your grades are posted. Also electronic reserves for some of the necessary references are available there. Any not available are on reserve in the Mallet Library.
- All communications concerning this course will be sent exclusively through the Bb mailing list, with the expectation that you will check your email and Bb Announcements daily. *It is your responsibility to update UTDirect with any changes in email address.*

- We suggest you use UT WebSpace <http://webspace.utexas.edu/> to store all computer files generated by this course for the duration of the semester.

## Assessment items and due-dates

### Analysis techniques assignment.....Due at the start of your third lab session

Hooked on PChem Lab Manual: pp205-210, using information in Chapter 3.

### Lab reports..... Due at the start of your lab session, according to the dates on the course calendar

You will write five lab reports following the format described in Dr. Campion's presentation.

### Rough Drafts ..... Due at the start of your lab session, according to the dates on the course calendar

In an effort to improve writing, these rough drafts are required, and will be graded.

### Error analyses.....Due with the associated Basic Report

Your best three error analyses will count, written following the format described in Section 1.5.4 of your lab manual. The first and second must be turned in with the second and third reports respectively, and can be rewritten within a week of receiving the initial grade.

## Grading

Five (5) lab reports.....75pts

Best three (3) error analyses ..... 15pts

Two (2) Rough Drafts..... 5pts

Analysis techniques homework..... 5pts

**Total.....100 pts**

Note: basic policy information for both CH 153K & 154K is found in Chapter 1. Chapter 2 contains policies that apply solely to CH 154K. Section 1.3 of the manual contains information on course grading, and the late penalty system is available in Section 1.4.4. All report grades are available on Bb, protected using your UTEID. It is your responsibility to check your grades regularly. ***Grades are not curved***, therefore we expect an absolute level of achievement to attain a certain grade. You will be graded by all course TAs and effort is made to ensure consistency between graders. There is no final exam for this course.

*This course carries the **Writing Flag**. Writing Flag courses are designed to give students experience with writing in an academic discipline. In this class, you can expect to write regularly during the semester, complete substantial writing projects, and receive feedback from your instructor to help you improve your writing. You will also have the opportunity to revise one or more assignments. You should therefore expect a substantial portion of your grade to come from your written work.*

Estimated maximum grade cutoffs (points, not percentages):

A	≥90	C	73 - <77
A-	89 - <90	C-	70 - <73
B+	87 - <89	D+	65 - <70
B	83 - <87	D	60 - <65
B-	80 - <83	D-	55 - <60
C+	77 - <80	F	< 55

Due to the plus/minus grading system, grade cutoffs are absolute, and **NO ROUNDING WILL OCCUR**. Due to the smaller range for each grade level, it is all the more imperative for you to be proactive about any grading questions immediately. Scrounging for points at the end of term will not be tolerated, so **be sure to get any grade clarification from the grading TA as soon as possible**, and do the work necessary to reach your desired grade. Getting the grade you want is your job. Evaluating the quality of your work is ours. Any changes at the end of semester will require **PROOF** of a **SIGNIFICANT** grading error.

Each experiment is graded based on the rubric on the summary sheet (available in the manual of Bb). ***NOTE: failing to follow all directions results in point deductions apart from the rubric.***

Lab Partners will turn in ONE report between them per experiment. Each partner will alternate being the 'lead author.' The lead author is the one primarily responsible for the text of the report and any error analysis, while the secondary author will be primarily responsible for the spreadsheet/calculations. (This is one possible way to separate the work. We actually recommend team members work closely together on all aspects of every experiment. It is expected that all team members will be fully capable of

discussing any aspect of any experiment at any time after the completion of the report.) Both will receive the same grade, including the effect of any late points. You will each turn in an evaluation of your partner's contributions to the work. You will be working in groups throughout your career and it is important to learn how to manage the workload and responsibility. Because you each receive the same grade, it is in your best interest to stay involved, even if your partner is the lead author on a given report. When choosing a partner, therefore, it is wise to choose one who shares your goals for the course. If you want an 'A', then don't choose someone just trying to get the 'C-'. Remember, it is your job to obtain the education & earn the grade for which you have paid. Be SURE that you will earn your desired grade BEFORE the end of the semester. All grades in this course are earned, not given.

### **Turn-in Procedures and Late Policies**

Turn in reports to *your* TA who will time stamp them. Also, turn in an electronic version of your report through Bb's SafeAssign no later than the due date/time of the hard copy.

In order to be properly submitted, your report must have the *Report Summary Sheet* (from Bb) as the cover page, a printout of relevant electronic files, and the white sheets from your lab notebook placed at the end. There must be two copies of the front page of the summary sheet, both filled out completely. Your TA will keep one copy and return your report to you with the other copy.

You must attend 2 sessions/experiment. If you finish data collection the 1st session, you must work on the analysis/report in the computer lab during the 2nd. If you turn in the report early, you can leave.

All due dates are as posted on the course calendar included with this syllabus, on Blackboard, or posted outside the lab. To be on time, an assignment must be submitted within the first 15 minutes of the start of your lab period. After this, you will lose 20 points, and continue to lose 20 points per day until a grade of 0 (zero) is reached. (Failure to turn in the report to SafeAssign will result in a 10 pt/day penalty.) Weekends, school holidays, or emergency closures of the University do not count as late days. If the University is closed when an assignment is due, then it will be due on the first day the school reopens.

Once your report is turned in, it will be given to the grading TA, and it should be graded in no more than 1 session and returned to your TA who will return it to you. You MAY keep it, provided you have submitted a copy to SafeAssign AND the TA has a complete copy of the front page of the Summary Sheet. If you do not get it back in a timely fashion, please let the Lab Director know which report and due date seem to be missing.

If you have a concern about your grade, you may request a regrade within 2 sessions of that grade's posting. On a cover sheet, clearly explain your question and the reason you feel there is a mistake. Be specific, and resubmit it to the grader. If after reconsideration you still have concerns, see the Lab Director.

### **Make-Up Policies**

If you have an extenuating circumstance, tell your TA. *If and only if* your TA is impressed with your sob story or your outrageous creativity, s/he will make appropriate comments on your *Report Summary Sheet*.

NOTHING will be accepted after 5 p.m. on Friday, December 7. NO EXCEPTIONS. DON'T ASK. A student once lost her 4.0 because she didn't take this seriously.

If there is a conflict with an exam for another class or similar, per CNS policy, it is expected that the other professor offer a make-up time as they scheduled their exam outside of the scheduled class time. You are registered for this class at this time and this take precedence.

The fall schedule does not allow for extra time. It is vital that you attend all sessions and remain caught up. If something comes up, discuss it with your TA ASAP.

### **Appeals**

Our teaching assistants will make decisions concerning grades, attendance and other policy matters. Should you disagree with a TA, you are welcome to take the matter to the Lab Director.

### **Safety & Waste Disposal**

Safe lab practices and waste disposal procedures are described in the lab manual. Unsafe, imprudent and careless activities will result in you being removed from the lab. Continued noncompliance could result in a reduced lab grade or course failure.

## **Accommodations**

Students with disabilities who need special accommodations should notify the instructor at the beginning of the semester by presenting a letter from the SSD office (471-6259). "The University of Texas at Austin provides upon request appropriate academic accommodations for qualified students with disabilities. For more information, contact the Office of the Dean of Students at 471-6259, 471-6441 TTY."

## **Religious Observances**

By UT Austin policy, you must notify me of your pending absence at least fourteen days prior to the date of observance of a religious holy day. If you must miss a class, an examination, a work assignment, or a project in order to observe a religious holy day, you will be given an opportunity to complete the missed work within a reasonable time after the absence.

## **One-time Drop Policy**

Students have the option once in their undergraduate degree to drop a class or drop out of all classes in a semester right up til the last class day. This policy is available at [http://www.utexas.edu/faculty/council/2010-2011/legislation/EPC\\_OTD.html](http://www.utexas.edu/faculty/council/2010-2011/legislation/EPC_OTD.html) and was proposed and approved by UT Faculty Council on May 9, 2011. According to the policy as approved by the Provost, a student who has completed at least two long semesters here at UT can drop a class only if he or she has an average grade of D+ or below in the class at the time of the request and if there are no pending investigations of scholastic dishonesty for the course in question.

## **Academic Integrity**

Scholastic dishonesty will not be tolerated in this course. For a detailed discussion of our expectations of you, see Section 1.2 Scholastic Dishonesty in your lab manual. For definitions of unacceptable behaviour, such as plagiarism, and the UT policy regarding such activities, see the Student Judicial Services website: <http://deanofstudents.utexas.edu/sjs/academicintegrity.html>

## **Emergency Evacuations**

- Occupants of buildings on The University of Texas at Austin campus are required to evacuate buildings when a fire alarm is activated. Alarm activation or announcement requires exiting and assembling outside following staff instructions.
- Familiarize yourself with all exit doors of each classroom and building you may occupy. Remember that the nearest exit door may not be the one you used when entering the building.
- Students requiring assistance in evacuation shall inform their instructor in writing during the first week of class.
- In the event of an evacuation, follow the instruction of faculty or class instructors.
- Do not re-enter a building unless given instructions by the following: Austin Fire Department, The University of Texas at Austin Police Department, Fire Prevention Services office, or the Office of Campus Safety and Security, 512-471-5767, <http://www.utexas.edu/safety/>. Link to information regarding emergency evacuation routes and emergency procedures can be found at: [www.utexas.edu/emergency](http://www.utexas.edu/emergency)

## **Writing Center**

Writing Center: I strongly encourage you to use the Undergraduate Writing Center, FAC 211, 471-6222: <http://www.uwc.utexas.edu>). The Undergraduate Writing Center offers free, individualized, expert help with writing for any UT undergraduate, by appointment or on a drop-in basis. Any undergraduate enrolled in a course at UT can visit the UWC for assistance with any writing project. They work with students from every department on campus, for both academic and non-academic writing. Whether you are writing a lab report, a resume, a term paper, a statement for an application, or your own poetry, UWC consultants will be happy to work with you. Their services are not just for writing with "problems." Getting feedback from an informed audience is a normal part of a successful writing project. Consultants help students develop strategies to improve their writing. The assistance they provide is intended to foster independence. Each student determines how to use the consultant's advice. The consultants are trained to help you work on your writing in ways that preserve the integrity of your work.

# PCHEM Lab Course Schedule — Fall 2012

**Both Courses in RED**

**August/September**

**CH153K calendar in BLUE**  
**CH154K calendar in GREEN**

Sun	Mon	Tue	Wed	Thu	Fri	Sat
Aug 20	Aug 27	Aug 28	Aug 29	Aug 30	Aug 31	Sep 1
			Lab Introduction	Lab Introduction		Wyoming
VJ Day Sep 2	Labor Day Sep 3	Off A/D ends Sep 4	Start Lab 1	Start Lab 1	Sep 7	Sep 8
		Lab Introduction				NewMx
9	10	PATRIOT DAY 11	12	13	Last Drop 14	15
Grandparents' Day	Lab Introduction	Start Lab 1	HW Due L1 cont.	HW Due L1 cont.		@ Ole Miss
Rosh Hashanah 16	Constitution Day 17	18	Talk Like A Pirate Day 19	20	21	Autumn Begins 22
Stepfamily Day	Start Lab 1	HW Due L1 cont.	L1 Draft Due Revision Workshop	L1 Draft Due Revision Workshop		Bye!!
23	24	25	26	27	28	29
	HW Due L1 cont.	L1 Draft Due Revision Workshop	L1 Due/Start L2	L1 Due/Start L2		@ OSU

## October

Sun	Mon	Tue	Wed	Thu	Fri	Sat
Yom Kippur 30	Oct 1	Oct 2	Oct 3	Oct 4	Oct 5	Oct 6
Sukkot	L1 Draft Due Revision Workshop	L1 Due/Start L2	L2 Cont.	L2 Cont.		W. VA.
7	8	9	10	11	12	13
	L1 Due/Start L2	L2 Cont.	L2 Draft Due Revision Workshop Start L3	L2 Draft Due Revision Workshop		OU!!
14	15	Boss's Day 16	17	18	19	20
	L2 Cont.	L2 Draft Due Revision Workshop Start L3	L2 Due (incl. 1st EA) Start L3 L3 Cont/Proposals Due	L2 Due/Start L3 (incl. 2nd EA)		Sweetest Day Baylor
21	22	Mole Day 23	24	25	Eid-Al-Adha 26	27
	L2 Draft Due Revision Workshop Start L3/Proposals Due	L2 Due (incl. 1st EA) Start L3 L3 Cont/Proposals Due	L3 cont L3 Due/Start L4	L3 cont		@ Kansas
28	29	30	31	Nov 1	Nov 2	Nov 3
	CIS L2 Due (incl. 1st EA) Start L3 L3 Cont	CIS L3 cont L3 Due/Start L4	CIS All Hallow's Eve L3 Due/Start L4 (incl. 2nd EA) L4 Cont.	CIS L3 Due/Start L4 (incl. 2nd EA)		@ Tech

## November/December

Sun	Mon	Tue	Wed	Thu	Fri	Sat
4	Guy Fawkes 5	Election Day 6	7	8	9	10
DST Ends Fall Back	L3 cont L3 Due/Start L4	L3 Due/Start L4 (incl. 2nd EA) L4 Cont.	L4 cont L4 Due/Start L5	L4 cont		ISU
11	12	13	14	15	16	17
Veteran's Day	L3 Due/Start L4 (incl. 2nd EA) L4 Cont.	L4 cont L4 Due/Start L5	L4 Due/Start L5 L5 Cont.	L4 Due/Start L5		Bye!!
18	19	20	21	22	23	24
	L4 cont L4 Due/Start L5	L4 Due/Start L5 L5 Cont.	No Labs- Thanksgiving			TCU.
25	26	27	28	29	30	Dec 1
	L4 Due/Start L5 L5 Cont.	L5 cont L5 Due	L5 cont L5 Due	L5 cont		@ KState
Dec 2	Dec 3	Dec 4	Dec 5	Dec 6	Pearl Harbor 7	Dec 8
Advent	Lab 5 Due	Lab 5 Due/Open Lab scheduling Oral Presentations M/T/W			Lab 5 Due Mon All Due	Hanukah

REPORTS are due at the start of your lab according to the schedule above.

NO REPORTS will be accepted after 5pm on Friday December 7. No exceptions. Don't ask.

## Fall 2012 PChemLab Schedule

	Monday		Tuesday		Wednesday		Thursday	Friday
9-10			Rachel's Ofc. Hr.		Monroe 52103		Joshua's Ofc. Hr 10-12	
10-11	Monroe's Ofc. Hr 10-12	Soojung's Ofc. Hr 10-12						
11-12			Staff Mtg 11-12					
12-2	Alan's Ofc. Hr 12-2				Shauna's Ofc. Hr 12-2	Marlene's Ofc. Hr 12-2	Hoang's Ofc. Hr 12-2	
2-5	Alan 52075				Kyle's Ofc. Hr 1-3	Joshua 52080	Soojung 52120 CH154K	Shauna 52085
		Kyle 52115 CH154K						
5-7	William's Ofc. Hr				Liang's Ofc. Hr		Rachel's Ofc. Hr.	
7-10	William 52095		Rachel 52100		Liang 52105		Rachel 52112	

CH153K			CH154K		
TA	Grading	Email	TA	Grading	Email
Alan Meis	GD		Kyle Dupuis	AE/CT/NMR	
William Pinero	TV		Soojung Leem	MK/PB/RV	
Joshua Slocum	SL		Marlene Gutierrez	CS/DM/LE	
Monroe Griffin	LV				
Shauna Ingle	PA				
Liang Zhang	BP		Lab Directors		
Rachel Craigmile	BC/HC/PG		Dr. Robb Wilson		
Hoang Dang	ST/VP		Dr. Alan Campion		