

**CHEM 2285 QUANT LAB SYLLABUS – Spring 2017**

Instructor: Dr. Saiful M. Chowdhury (CPB 352)  
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- Contact relating to miscellaneous items by email preferred

Faculty profile: <http://www.uta.edu/chemistry/faculty/directory/Chowdhury.php>

Office hours: MW 12 pm (noon) – 1 pm or by appointment

TAs and Meeting Times

Section	Meeting Time/Place	TA	Office hours	Contact
001 MW	1-5 pm CPB 212	Jayanta K Chakrabarty	CPB 309 Tue, Thu : 9.00 am – 11.00 am	<a href="mailto:jayanta.chakrabarty@mavs.uta.edu">jayanta.chakrabarty@mavs.uta.edu</a>
002 TTh	1-5 pm CPB 212	Maheshika Wanigasekara	CPB 309 M, W : 12.00 noon -2.00 pm	<a href="mailto:maheshika.wanigasekara@mavs.uta.edu">maheshika.wanigasekara@mavs.uta.edu</a>
003 TTh	6-10 pm CPB 212	Mohammad K Hossain	CPB 304/307 M, W : 3.00 pm - 5.00 pm	<a href="mailto:mohammadkhossain@mavs.uta.edu">mohammadkhossain@mavs.uta.edu</a>

Text: **Laboratory Manual** will be distributed electronically  
**Book:** Gary Christian, *Analytical Chemistry*, 6<sup>th</sup> Edition  
 Daniel C. Harris, *Quantitative Chemical Analysis*, 9/8<sup>th</sup> Edition

Other materials: Scientific calculator, Laboratory notebook, Laptop, USB portable storage drive

Grading:

Lab Reports (9)	400 pts.	(8 x 50, one lab dropped)
Quizzes (4)	200 pts.	(4 x 50)

**Description and Goals of the Course:** Develop proficiency with both theoretical basis and practical laboratory methods of quantitative chemical analysis including the usage of computers for data analysis

and presentation. The techniques include: sampling, statistics, spectrophotometry, calibration, and titrations.

### Recipe for success

- 1) Attendance is a must! Because most of the experiments build on one another, missing one lab can mean the difference between success and failure in the course.
- 2) Prior to lab, read the laboratory manual and suggested textbook chapters/sections for the experiment which will be done that day.
- 3) Don't procrastinate! You have to read and plan many days before for the successful completion of each experiment.

Use of a computer (spreadsheets and word processors) an essential component of this course. The university provides numerous sites for free student computer usage with access to various software. It is your responsibility to practice and familiarize yourself with the software. Ask your TA if you need extra guidance.

### Mandatory Online Safety Training:

Students registered for this course must complete the University's required "Lab Safety Training" prior to entering the lab and undertaking any activities. Students will be notified via Mav Mail when their online training is available. Once notified, students should complete the required module as soon as possible, but no later than their first lab meeting. Until all required Lab Safety Training is completed, a student will not be given access to lab facilities, will not be able to participate in any lab activities, and will earn a grade of zero for any uncompleted work.

1. You should have received an email from the UTA Compliance Department. Click on the link in the email (or navigate to <https://training.uta.edu> for the login page)
2. Log on using your network log-on ID and password (what you use to access email). If you do not know your Net ID or need to reset your password, visit <http://oit.uta.edu/cs/accounts/student/netid/netid.html>.
3. The available courses for completion will be listed. For Chemistry 1441, complete the course entitled 'Student Lab Safety Training'
4. Go to 'Training I've Completed', and print this displayed page for your TA. Verify that it shows clearly your name, that the training is completed/passed and the date when the training was completed. If you have just completed the training but it is not updated on the 'Training I've Completed' page, try the training again (you should get to the Certificate page). If this does not work, call the training helpline at 817-272-5100.
5. If you did not receive the training email and you have not already completed the training you will need to contact the training helpline (817-272-5100) or email [compliance@uta.edu](mailto:compliance@uta.edu).
6. Students who have not completed the training by census date may be dropped from the lab (and consequently the lecture).

Once completed, Lab Safety Training is valid for the remainder of the same academic year (i.e. through next August) for all courses that include a lab. If a student enrolls in a lab course in a subsequent academic year, he/she must complete the required training again.

All questions/problems with online training should be directed to the University Compliance Services Training Helpline at 817-272-5100 or by emailing [compliance@uta.edu](mailto:compliance@uta.edu).

**Policies and Notes:**

**Attendance:** At The University of Texas at Arlington, taking attendance is not required but attendance is a critical indicator in student success. Each faculty member is free to develop his or her own methods of evaluating students' academic performance, which includes establishing course-specific policies on attendance. **Attendance is a must for chem 2285.** However, while UT Arlington does not require instructors to take attendance in their courses, the U.S. Department of Education requires that the University have a mechanism in place to mark when Federal Student Aid recipients "begin attendance in a course." UT Arlington instructors will report when students begin attendance in a course as part of the final grading process. Specifically, when assigning a student a grade of F, faculty report the last date a student attended their class based on evidence such as a test, participation in a class project or presentation, or an engagement online via Blackboard. This date is reported to the Department of Education for federal financial aid recipients.

**Drop Policy:** Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student's responsibility to officially withdraw if they do not plan to attend after registering. Students will not be automatically dropped for non-attendance. Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. For more information, contact the Office of Financial Aid and Scholarships (<http://www.uta.edu/aao/fao/>).

**Disability Accommodations:** UT Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including *The Americans with Disabilities Act (ADA)*, *The Americans with Disabilities Amendments Act (ADAAA)*, and *Section 504 of the Rehabilitation Act*. All instructors at UT Arlington are required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of disability. Students are responsible for providing the instructor with official notification in the form of a letter certified by the Office for Students with Disabilities (OSD). Only those students who have officially documented a need for an accommodation will have their request honored. Students experiencing a range of conditions (Physical, Learning, Chronic Health, Mental Health, and Sensory) that may cause diminished academic performance or other barriers to learning may seek services and/or accommodations by contacting:  
The Office for Students with Disabilities, (OSD) [www.uta.edu/disability](http://www.uta.edu/disability) or calling 817-272-3364.  
Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at [www.uta.edu/disability](http://www.uta.edu/disability).

Counseling and Psychological Services, (CAPS) [www.uta.edu/caps/](http://www.uta.edu/caps/) or calling 817-272-3671 is also available to all students to help increase their understanding of personal issues, address mental and behavioral health problems and make positive changes in their lives.

**Non-Discrimination Policy:** *The University of Texas at Arlington does not discriminate on the basis of race, color, national origin, religion, age, gender, sexual orientation, disabilities, genetic information, and/or veteran status in its educational programs or activities it operates. For more information, visit [uta.edu/eos](http://uta.edu/eos).*

**Title IX Policy:** The University of Texas at Arlington ("University") is committed to maintaining a learning and working environment that is free from discrimination based on sex in accordance with Title IX of the

Higher Education Amendments of 1972 (Title IX), which prohibits discrimination on the basis of sex in educational programs or activities; Title VII of the Civil Rights Act of 1964 (Title VII), which prohibits sex discrimination in employment; and the Campus Sexual Violence Elimination Act (SaVE Act). Sexual misconduct is a form of sex discrimination and will not be tolerated. *For information regarding Title IX, visit [www.uta.edu/titleIX](http://www.uta.edu/titleIX) or contact Ms. Jean Hood, Vice President and Title IX Coordinator at (817) 272-7091 or [jmhood@uta.edu](mailto:jmhood@uta.edu).*

**Academic Integrity:** Students enrolled all UT Arlington courses are expected to adhere to the UT Arlington Honor Code:

*I pledge, on my honor, to uphold UT Arlington's tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence.*

*I promise that I will submit only work that I personally create or contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.*

UT Arlington faculty members may employ the Honor Code in their courses by having students acknowledge the honor code as part of an examination or requiring students to incorporate the honor code into any work submitted. Per UT System *Regents' Rule* 50101, §2.2, suspected violations of university's standards for academic integrity (including the Honor Code) will be referred to the Office of Student Conduct. Violators will be disciplined in accordance with University policy, which may result in the student's suspension or expulsion from the University. Additional information is available at <https://www.uta.edu/conduct/>.

**Lab Safety Training:** Students registered for CHEM2285 (laboratory part of this course) must complete all required lab safety training prior to entering the lab and undertaking any activities. Once completed, Lab Safety Training is valid for the remainder of the same academic year (i.e., Fall through Summer II) and must be completed a new in subsequent years. There are no exceptions to this University policy. Failure to complete the required training will preclude participation in any lab activities, including those for which a grade is assigned.

**Electronic Communication:** UT Arlington has adopted MavMail as its official means to communicate with students about important deadlines and events, as well as to transact university-related business regarding financial aid, tuition, grades, graduation, etc. All students are assigned a MavMail account and are responsible for checking the inbox regularly. There is no additional charge to students for using this account, which remains active even after graduation. Information about activating and using MavMail is available at <http://www.uta.edu/oit/cs/email/mavmail.php>.

**Campus Carry:** Effective August 1, 2016, the Campus Carry law (Senate Bill 11) allows those licensed individuals to carry a concealed handgun in buildings on public university campuses, except in locations the University establishes as prohibited. Under the new law, openly carrying handguns is not allowed on college campuses. For more information, visit <http://www.uta.edu/news/info/campus-carry/>

**Student Feedback Survey:** At the end of each term, students enrolled in face-to-face and online classes categorized as "lecture," "seminar," or "laboratory" are directed to complete an online Student Feedback Survey (SFS). Instructions on how to access the SFS for this course will be sent directly to each student through MavMail approximately 10 days before the end of the term. Each student's feedback via the SFS database is aggregated with that of other students enrolled in the course. Students' anonymity will be protected to the extent that the law allows. UT Arlington's effort to solicit, gather, tabulate, and publish

student feedback is required by state law and aggregate results are posted online. Data from SFS is also used for faculty and program evaluations. For more information, visit <http://www.uta.edu/sfs>.

**Final Review Week:** for semester-long courses, a period of five class days prior to the first day of final examinations in the long sessions shall be designated as Final Review Week. The purpose of this week is to allow students sufficient time to prepare for final examinations. During this week, there shall be no scheduled activities such as required field trips or performances; and no instructor shall assign any themes, research problems or exercises of similar scope that have a completion date during or following this week *unless specified in the class syllabus*. During Final Review Week, an instructor shall not give any examinations constituting 10% or more of the final grade, except makeup tests and laboratory examinations. In addition, no instructor shall give any portion of the final examination during Final Review Week. During this week, classes are held as scheduled. In addition, instructors are not required to limit content to topics that have been previously covered; they may introduce new concepts as appropriate.

**Students with Pregnancies:** For students who are pregnant, it is recommended by the Chemistry and Biochemistry Department that you do not enroll into a chemistry lab at this time. If you become pregnant during the semester, we recommend dropping the course as soon as possible and special provisions will be made to assist you in finishing the course at later date. **Please see your faculty instructor for assistance.**

**Emergency Exit Procedures:** Should we experience an emergency event that requires us to vacate the building, students should exit the room and move toward the nearest exit, which is located right to the classroom entrance. When exiting the building during an emergency, one should never take an elevator but should use the stairwells. Faculty members and instructional staff will assist students in selecting the safest route for evacuation and will make arrangements to assist individuals with disabilities. Students should also be encouraged to subscribe to the MavAlert system that will send information in case of an emergency to their cell phones or email accounts. Anyone can subscribe at <https://mavalert.uta.edu/> or <https://mavalert.uta.edu/register.php>

**Student Support Services:** UT Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. Resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals, students may visit the reception desk at University College (Ransom Hall), call the Maverick Resource Hotline at 817-272-6107, send a message to [resources@uta.edu](mailto:resources@uta.edu), or view the information at <http://www.uta.edu/universitycollege/resources/index.php>.

The IDEAS Center (2<sup>nd</sup> Floor of Central Library) offers free tutoring to all students with a focus on transfer students, sophomores, veterans and others undergoing a transition to UT Arlington. To schedule an appointment with a peer tutor or mentor email [IDEAS@uta.edu](mailto:IDEAS@uta.edu) or call (817) 272-6593.

**The English Writing Center (411LIBR):** The Writing Center Offers free tutoring in 20-, 40-, or 60-minute face-to-face and online sessions to all UTA students on any phase of their UTA coursework. Our hours are 9 am to 8 pm Mon.-Thurs., 9 am-3 pm Fri. and Noon-6 pm Sat. and Sun. Register and make appointments online at <http://uta.mywconline.com>. Classroom Visits, workshops, and specialized services for graduate students are also available. Please see [www.uta.edu/owl](http://www.uta.edu/owl) for detailed information on all our programs and services.

The Library's 2<sup>nd</sup> floor Academic Plaza offers students a central hub of support services, including IDEAS Center, University Advising Services, Transfer UTA and various college/school advising hours. Services are available during the library's hours of operation. <http://library.uta.edu/academic-plaza>  
 Librarian to Contact: [Optional.] [Insert the name and contact information – look up here: <http://www.uta.edu/library/help/subject-librarians.php> ] [See the end of this document for additional information about library links that might be embedded in your syllabus or other course materials.]

### Spring 2017 Schedule for CHEM 2285 Quant Lab (subject to change)

Week starting	Mon (1-5)/Tues (1-5)/ Tues (6-10)	Wed (1-5) /Thurs (1-5)/ Thurs (6-10)	Lab Report Submission	
			Sec 01	Sec 02/ Sec 03
Mon, 01/16/17	No lab; Complete on-line safety training (see p. 7)			
Mon, 01/23/17	Lab check-in; Group assignments (CPB 212)	Prelab 1 <i>Measurement &amp; Statistics</i> Exp. 1 (CPB 212)	Exp.1 02/01/2017	Exp.1 02/02/2017
Mon, 01/30/17	Exp. 2 (CPB 212)	Quiz 1: <i>Measurement &amp; Statistics</i> (CPB 212)	Exp.2 02/06/2017	Exp.2 02/07/2017
Mon, 02/06/17	Exp. 3 (CPB 212)	Prelab 2: <i>Spectroscopy</i> Begin Exp. 4 (CPB 212)	Exp.3 02/13/2017	Exp.3 02/14/2017
Mon, 02/13/17	Exp. 4 continued (CPB 212)	Quiz 2: <i>Spectroscopy</i> (CPB 212)	Exp.4 02/20/2017	Exp.4 02/21/2017
Mon, 02/20/17	Begin Exp. 5(CPB 212)	Exp. 5 continued	Exp.5 03/01/2017	Exp.5 03/02/2017
Mon, 02/27/17	Exp. 6	Prelab 3 <i>Equilibria &amp; Titrations</i> Overview of titrations (CPB 212)	Exp.6 03/06/2017	Exp.6 03/07/2017
Mon, 03/06/17	Begin Exp. 7	Exp.7 continued	Exp.7 03/20/2017	Exp.7 03/21/2017
Spring Break (March 13-17, 2017)				
Mon, 03/20/17	Quiz 3: <i>Equilibria &amp; Titrations</i> (CPB 212)	Begin Exp 8		
Mon, 03/27/17	Exp 8 continued	Begin Exp 9	Exp.8 04/03/2017	Exp.8 04/04/2017

Mon, 04/03/17	Exp 9 continued	No lab	Exp.9 04/10/2017	Exp.9 04/11/2017
Mon, 04/10/17	<i>Final Quiz</i>	<b>Checkout</b>		

**“As the instructor for this course, I reserve the right to adjust this schedule in any way that serves the educational needs of the students enrolled in this course”. – Chowdhury, Saiful M**

### Laboratory Exercises

Expt. No.	Title	# Lab Periods
1	Statistical Penny Pinching	1
2	Calibration of Volumetric Glassware	1
3	Sources of Variance – The Weakest Link	1
4	Fe in Vitamin Tablets	2
5	Determination of Nitrate Nitrogen in water	2
6	Two Component Colorimetry	1
7	Quantitative Determination of Caffeine from Unknown Samples	2
8	Acid-Base Titrations	2
9	Potentiometric Titration of Chloride and Iodide	2

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1. Login to **Blackboard** at <https://elearn.uta.edu> with your Net ID and password.

2. Under **My Blackboard** tab, click **Lab Safety Training**.
3. Click **Welcome** from the left pane to start and follow the instructions.

Once completed, Lab Safety Training is valid for the remainder of the same academic year (i.e. September through next August) for all UTA courses that include a lab. If a student enrolls in a lab course in a subsequent academic year, he/she must complete the required training again.

**All questions/problems with online training should be directed to the Blackboard Support Center either online or by calling 1-855-308-5542. General questions about the Lab Safety Training, including content should be directed to the Office of Environmental Health and Safety at (817) 272-2185 or [ehsafety@uta.edu](mailto:ehsafety@uta.edu)**

**All questions/problems with online training should be directed to the University Compliance Services Training Helpline at 817-272-5100 or by emailing [compliance@uta.edu](mailto:compliance@uta.edu).**

Emergency Phone Numbers: In case of an on-campus emergency, call the UT Arlington Police Department at 817-272-3003 (non-campus phone), 2-3003 (campus phone). You may also dial 911. Non-emergency number 817-272-3381

Library Home Page [library.uta.edu](http://library.uta.edu)

Resources for Students

Academic Help

Academic Plaza Consultation Services [library.uta.edu/academic-plaza](http://library.uta.edu/academic-plaza)

Ask Us [ask.uta.edu/](http://ask.uta.edu/)

Library Tutorials [library.uta.edu/how-to](http://library.uta.edu/how-to)

Subject and Course Research Guides [libguides.uta.edu](http://libguides.uta.edu)

Subject Librarians [library.uta.edu/subject-librarians](http://library.uta.edu/subject-librarians)

Resources

A to Z List of Library Databases [libguides.uta.edu/az.php](http://libguides.uta.edu/az.php)

Course Reserves [pulse.uta.edu/vwebv/enterCourseReserve.do](http://pulse.uta.edu/vwebv/enterCourseReserve.do)

FabLab [fablab.uta.edu/](http://fablab.uta.edu/)

Special Collections [library.uta.edu/special-collections](http://library.uta.edu/special-collections)

Study Room Reservations [openroom.uta.edu/](http://openroom.uta.edu/)

Teaching & Learning Services for Faculty

Copyright Consultation [library-sc@listserv.uta.edu](mailto:library-sc@listserv.uta.edu)

Course Research Guide Development, Andy Herzog [amherzog@uta.edu](mailto:amherzog@uta.edu) or your subject librarian

Data Visualization Instruction, Peace Ossom-Williamson [peace@uta.edu](mailto:peace@uta.edu)

Digital Humanities Instruction, Rafia Mirza [rafia@uta.edu](mailto:rafia@uta.edu)

Graduate Student Research Skills Instruction, Andy Herzog [amherzog@uta.edu](mailto:amherzog@uta.edu) or your subject librarian

Project or Problem-Based Instruction, Gretchen Trkay [gtrkay@uta.edu](mailto:gtrkay@uta.edu)

Undergraduate Research Skills Instruction, Gretchen Trkay [gtrkay@uta.edu](mailto:gtrkay@uta.edu) or your subject librarian.