CHEM 1112 General Chemistry II Laboratory		
	Professors	**Sections**
	Yu(Tony) Huang, Ph.D	127, 128
	Amandeep Sra, Ph.D	Lab coordinator
Term	**Spring 2021**	
Meetings	Workshops + Labs: Meeting on Microsoft Teams through eLearning. All Lectures will be delivered synchronously and recorded for asynchronous participation.	

Professor's Contact Information

Name	Office	Email Address
Yu(Tony) Huang	SLC 3.403	yu.huang@utdallas.edu
Amandeep Sra	BE 2.328	amandeep.sra@utdallas.edu

Course Modality and Expectations

Instructional Mode	***Remote synchronous with an Asynchronous option*** Refer to the Spring 2021 Registration Information webpage for more detailed information.
Course Platform	We will communicate via **Microsoft Teams (MT)** and **BlackBoard Collaborate (BBC)**. Content will be delivered synchronously during class time and recorded. **Note:** We will meet via Microsoft Teams for the lecture class. Students should log into eLearning and will have access to Teams link. If Teams is having issues, we will switch to **BB Collaborate - courseroom** in eLearning. Office hours will be conducted in BB C through course room.
Expectations	Students will be expected to participate and adhere to guidelines and course policies as discussed below.
Asynchronous Learning Guidelines	Refer to the Asynchronous Access for Spring 2021 FAQ webpage. Any student has the option at any time to select asynchronous access to this course. Asynchronous access does not mean that you can complete the course and course requirements at your own pace or discretion. Asynchronous access means flexibility is given to you completing the course at a distance. You will have the same opportunities for learning and meet the same course standards as the other students. You will need to meet the requirements and standards set forth by the instructor. You also will need to follow along at the pace of the class even though you are not meeting at the time of the class. There is no need to notify me that you are switching to/from the asynchronous mode, since flexibility is built into the course structure:

	• all synchronous lab sessions will be recorded, allowing you to access them when it is best for you to benefit from that content • 24 hour window of time will be available to allow some flexibility for submission of pre-labs and labs.
COVID-19 Guidelines and Resources	Please see University's COVID-19 resources for students and instructors of record. Please see http://go.utdallas.edu/syllabus-policies.

Office hours: Contact instructor / TA by email and they will conduct a session online.

General Course Information

Pre-requisites, Co-requisites, & other restrictions	Passing Grades in both CHEM 1311 and CHEM 1111 (General Chemistry I Lecture and Lab) or equivalents. No Audits allowed.
Course Description	This course is a continuation of CHEM 1111, it incorporates experiments in kinetics, acid base chemistry, chemical equilibrium, electrochemistry, and colligative properties.
Expected Learning Outcomes	*Students should be able to:* 1. Use graphing techniques and data analysis to evaluate data 2. Think critically through the analysis of experimental data 3. Determine the rate law of a chemical reaction 4. Determine equilibrium constant of a chemical system 5. Explain the effect of various parameters on equilibrium of a chemical system, 6. Generate and interpret pH titration curves
Required Texts & Materials	• Access to online labs through LabFLow. https://labflow.com. Access to Labflow is **free for students** for the spring semester. Login information is posted on eLearning coursepage. If you can purchased LabFlow through the bookstore, they will issue a refund. • A non-programming calculator for calculations. • Access to eLearning
Supplemental Texts, Readings, & Materials	You may refer to the following material for a better understanding of the chemical principles. • **Lecture Textbook:** *Chemistry: Atoms First, 4th Edition* (Julia Burdge, Jason Overby); McGraw-Hill. The textbook is available as an online version through ALEKS 360 that you purchase for your lecture CHEM 1311 class. • OpenStax is a free online textbook for General Chemistry. You can download it at https://openstax.org/details/books/chemistry-atoms-first-2e
Class Attendance	Regular and punctual class attendance is expected regardless of modality. Students who fail to attend class regularly are inviting scholastic difficulty.
Course Access and Navigation	This course can be accessed using your UT Dallas NetID account on the eLearning website. Please see the course access and navigation section of the Getting Started with eLearning webpage for more information. To become familiar with the eLearning tool, please see the Student eLearning Tutorials webpage. UT Dallas provides eLearning technical support 24 hours a day, 7 days a week. The eLearning Support Center includes a toll-free telephone number for immediate assistance (1-866-588-3192), email request service, and an online chat service.

Communication	This course utilizes online tools for interaction and communication. Some external communication tools such as regular email and a web conferencing tool may also be used during the semester. For more details, please visit the Student eLearning Tutorials webpage for video demonstrations on eLearning tools. Student emails and discussion board messages will be answered within 3 working days under normal circumstances.
Student Resources	Online students have access to resources including the McDermott Library, Academic Advising, The Office of Student AccessAbility, and many others. Please see the eLearning Current Students webpage for more information.
Server Unavailability or Other Technical Difficulties	The University is committed to providing a reliable learning management system to all users. However, in the event of any unexpected server outage or any unusual technical difficulty which prevents students from completing a time sensitive assessment activity, the instructor will provide an appropriate accommodation based on the situation. Students should immediately report any problems to the instructor and also contact the online eLearning Help Desk. The instructor and the eLearning Help Desk will work with the student to resolve any issues at the earliest possible time.
Classroom Materials	The Instructor will provide class materials that will be made available to all students registered for this class as they are intended to supplement the classroom experience. These materials may be downloaded during the course; however, these materials are for registered students' use only. Classroom materials may not be reproduced or shared with those not in class, or uploaded to other online environments except to implement an approved Office of Student AccessAbility accommodation. Failure to comply with these University requirements is a violation of the Student Code of Conduct.
Class Recordings	All recordings will be available to all students registered for this class as they are intended to supplement the classroom experience. Students are expected to follow appropriate University policies and maintain the security of passwords used to access recorded lectures. Unless the Office of Student AccessAbility has approved the student to record the instruction, students are expressly prohibited from recording any part of this course. Recordings may not be published, reproduced, or shared with those not in the class, or uploaded to other online environments except to implement an approved Office of Student AccessAbility accommodation. If the instructor or a UTD school/department/office plans any other uses for the recordings, consent of the students identifiable in the recordings is required prior to such use unless an exception is allowed by law. Failure to comply with these University requirements is a violation of the Student Code of Conduct.

Teaching Assistant

Teaching Assistant	E-mail
Himanshu Polara	himanshu.polara@utdallas.edu

The easiest way to contact an instructor and/or TA is via e-mail.
Every instructor and TA will check their e-mail frequently and they try to respond as fast as possible.
Please always include both – your TA and your instructor – in your e-mail.

Assignments & Academic Calendar – CHEM 1112

There will be 11 lab assignments during the semester. There will be no makeup labs and you are required to attend your own Lab section.

This schedule and timeline are subject to change at the discretion of the lab coordinator.

Day	Exp. #	Experiment	Report Due	PreLab No.
Jan 25-Jan 29		Syllabus & Lab Safety	Feb 1-Feb 5	Safety Quiz on eLearning
Feb 1-Feb 5	1	Excel Exercise	Feb 8-Feb 12	1
Feb 8-Feb 12	2	Constant Pressure Calorimetry	Feb 15-Feb19	2
Feb 15-Feb19	3	Molar Mass of Solute using Freezing Point Depression	Feb 22-Feb 26	3
Feb 22-Feb 26	4	Kinetics of Iodine Clock Reaction	Mar 1-Mar 5	4
Mar 1-Mar 5	5	Le Châtelier's Principle	Mar 8-Mar 12	5
Mar 8-Mar 12	6	Buffer Solutions	Mar 22-Mar 26	6
Mar 22-Mar 26	7	Determination of Molar mass and Identity of Diprotic Acid	Mar 29-Apr 2	7
Mar 29-Apr 2	8	Determination of Solubility Product Constant	Apr 5-Apr 9	8
Apr 5-Apr 9	9	Entropy of Borax Dissolution	Apr 12 - Apr16	9
Apr 12 - Apr16	10	Voltaic Cells	Apr 19 –Apr 23	10

Course Policies

Safety	IMPORTANT: In accordance with University and Chemistry Department safety rules, any time anyone (student, TA, instructor, or visitor) is in a lab, Z87-rated safety eyewear must be worn. In addition, arms, legs and feet should be covered in lab. Short pants and skirts (which expose calves or thighs) are not allowed. Sleeveless shirts (including spaghetti strap shirts), or shirts that expose your midriff are also not allowed—however, a lab coat may be worn over these shirts during lab. Closed-toed shoes that fully cover your foot are also required. Hair longer than shoulder length must be put up in an appropriate manner to keep it out of harm's way. In summary, all students are responsible for all information inside the undergraduate safety manual uploaded on eLearning. While we are not meeting in person for fall labs, knowledge about safety rules protocols is very important to avoid accidents in the lab.
Safety Quiz	Login to the eLearning lab course. Read the syllabus and the three safety documents in the safety folder. A safety quiz will pop-up ONLY after you have reviewed the safety documents. Begin the safety quiz. You have **2 attempts** for the safety quiz.
Pre-labs	**Prelabs will be conducted on Labflow platform.** Each week students are expected to prepare for the lab by: A. Reading and understanding the experiment. B. Attending the workshop. C. Answering **about 10-12 questions on LabFlow** for that particular lab. You will be given 2 hour window in a 24 hour time frame from the end of the lab lecture to complete the prelab quiz. You will have **two attempts** to complete the pre-lab quiz. It is absolutely imperative that you have read and UNDERSTOOD the lab prior to beginning the pre-lab quiz. Students are expected to take the pre-lab quiz on their own, without help from anyone or the internet. However, students are permitted to use materials on LabFlow or textbook during the pre-lab quiz. ***Students who do not complete the pre-lab quiz will receive a score of zero for that pre-lab.***
Workshops	Workshops are *open discussions* designed to help you understand the concepts and techniques involved in each experiment. The goal here is to make the lab experience more enjoyable by assisting students to reach a basic, overall understanding of the experiment and the science. It is advised to read and gain an initial understanding the lab prior to the lab period in order to be better prepared for both the Workshops and the Experiments.
Post-Lab Assignments s	There are no formal lab reports required for this course. You will be provided with a set of data on LabFlow. You will be performing the analysis of the data (2 attempts) and answering open ended questions in LabFlow.

	Each experiment will end with an executive summary of your lab. You will be given a week time to complete the post-lab write-up. For example, if an your lab meets between 10:00–12:45 PM on Tuesday, January 26, 2021, the post-lab for that exp. will be due at 10:00 AM next Tuesday, Feb 2, 2021. NOTE: A handout on writing an executive summary is posted on eLearning course page. There will be no extensions provided for Post Lab submissions except under extenuating circumstances, and with proper documentation. Late submissions will be deducted 5% for each late day.
Data	Use scientific notations and rules of significant figures when manipulating your data to improve accuracy. 0.000789 does not equal to 0.0008, it's 7.89×10^{-4}. Calculating this way might improve % error.
Grading (credit) Criteria	**Summary of Points:** Each experiment: Pts. Pre-lab quiz 25 Post Lab Assignments 75 Total 100 There are a total of 11 labs (10 experiments + 1 safety lab). Your final letter grade for the course will be determined using a scale such as the one below where the class average is set at the "B-/C+" border (e.g., 79.5 points): A+ 97 & above C 73-76 A 93-96 C- 70-72 A- 90-92 D+ 67-69 B+ 87-89 D 63-66 B 83-86 D- 60-62 B- 80-82 F 59 & below C+ 77-79 *Note: Each Section is a unique course; sections are not graded together, but we have uniform grading scales.* *If you suspect that an assignment has been graded incorrectly, you have **one week**, after the assignment is returned to you, to contact the TA/instructor to have the grade changed.*
Extra Credit	None
Comet Creed	*This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:* "As a Comet, I pledge honesty, integrity, and service in all that I do."
UT Dallas Syllabus Policies and Procedures	*The information contained in the following link constitutes the University's policies and procedures segment of the course syllabus.* *Please go to http://go.utdallas.edu/syllabus-policies for these policies.*

These descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.