

CHMB16H3
TECHNIQUES IN ANALYTICAL CHEMISTRY
FALL 2018 COURSE SYLLABUS

Course Instructors

Kagan Kerman (Theoretical)

Office hours:

Reading: Chapter 2 Tools of the Trade is important for your practicals. Please, read it carefully!

Sept. 17 Experimental Error

Learning objectives: Significant figures, random and systematic errors, uncertainties, confidence intervals

QCA 9th Edition, Chapter 3, Section 3-1 to 4

QCA 8th Edition, Chapter 3, Sections 3-1 to 4

Problems: 3-1, 3-2, 3-3, 3-5, 3-10, 3-13 (same in 9th and 8th Editions)

Statistics

Learning objectives: Regression coefficient, method of least squares, t

Learning objectives: pH measurement with a glass electrode
QCA 9th Edition, Chapter 15, Sections 15-1 to 5
QCA 8th Edition, Chapter 14, Sections 14-1 to 5

Oct. 22 **Redox Titrations**

Learning objectives: Potentiometric titrations
QCA 9th Edition, Chapter 16, Sections 16-1 to 7
QCA 8th

Given the importance of the lab component of this course, any labs missed in excess of one will receive a mark of zero regardless of the reason and no re-weighting will occur. Labs missed without adequate documentation will also receive a mark of zero.

Ancillary Fees: The Department of Physical and Environmental Science at UTSC provides state-of-the-art education in chemistry. Chemistry being an experimental science makes learning in a laboratory setting critical. In order to provide the latest technology to enhance the student learning experience, UTSC will be charging ancillary fees for all chemistry courses that have a laboratory component. These fees are used to recover the cost of materials and services used during the lab and to maintain and upgrade the equipment used by students. To view a complete list of those fees, students are encouraged to visit the following link:

<http://www.planningandbudget.utoronto.ca/Assets/Basic+Operations+Digital+Assets/Planning+2012-13+Category+5+Ancillary+Fees.pdf>

Office Hours: Students are welcome to ask questions or resolve lab-related problems by contacting the Course Instructor either by dropping in during scheduled office hours or by making an appointment. **Students are responsible for work missed as a result of absence; the Course Instructors will not re-teach material covered in the lectures and lab sessions.**

e-mail Communication: All the messages about the theoretical sessions that you wish to communicate to Dr. Kerman should be submitted to the discussion board of the course on Quercus. You are encouraged to discuss and review lecture material with him during his office hours.

Understanding that Email communication is rapid, convenient, and efficient and you are encouraged to use it to enhance your learning and experience in the Practical sessions with Dr. Soong. With that said, it is essential that you follow a few rules:

* All course communication should be conducted through Quercus or your utorontid

Missed Mid-term Test: The exact dates of the mid-term tests are provided in the Course Topics schedule. Students who miss the test will be assigned a mark of zero for the test, unless they

Academic Integrity: Honesty and fairness are considered fundamental to the University's mission, and, as a result, all those who violate those principles are dealt with as if they were damaging the integrity of the University itself. When students are suspected of cheating or a similar academic offence, they are usually surprised at how formally and seriously the matter is dealt with - and how severe the consequences can be if it is determined that cheating did occur. The University of Toronto treats cases of cheating and plagiarism very seriously.

Examples of offences for which you will be penalized include (but are not limited to):

- Using any unauthorized aids on an exam or test (e.g. "cheat sheets")
- Representing someone else's work or words as your own - plagiarism (see web document "How not to plagiarize" available online at <http://www.utoronto.ca/writing/plagsep.html>)
- Falsifying documents or grades
- Purchasing an essay
- Submitting someone else's work as your own
- Submitting the same essay or report in more than one course (without permission)
- Looking at someone else's answers during an exam or test
- Impersonating another person at an exam or test or having someone else impersonate you
- Making up sources or facts for an essay or report

As a student it is your responsibility to ensure the integrity of your work and to understand what constitutes an academic offence. If you have any concerns that you may be crossing the line, please, read from the website

<http://www.utoronto.ca/academicintegrity/resources/students.html>

and always consult your instructor. Your instructor can explain, for example, the nuances of plagiarism and how to use secondary sources appropriately, he or she will also tell you what kinds of aids - calculators, dictionaries, etc. are permitted in a test or exam. Ignorance of the rules does not excuse cheating or plagiarism. Students should be aware that by taking this course all required papers may be subject to submission for a similarity review to Turnitin.com for the detection of plagiarism. All submitted papers will be included as source documents in the Turnitin.com reference database solely for the purpose of detecting plagiarism of such papers. The terms that apply to the University's use of the Turnitin.com service are described on the Turnitin.com web site.

Th1aa.69849()JTJ 236.974p

ri1(l)11.5331(a)-14.32()-16.4669(t)0.874347sm

ru o t(s)5.28642(,)-5.80946((l)11.5318(c)-14.32392()-.892(p)-0.95892(l)0.873046(116()-1Tu46()-1T