Course Outline
CHEM 2813 –ANALYTICAL CHEMISTRY 1
Winter 2017

Professor
Dr. John Murimboh
KCIC LL34
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Office Hours T 1:30 – 4:30pm, KCIC 014 (small classroom)

Lectures M/W/F 8:30 – 9:30 am, ELL 320

Labs W/Th 1:30 – 4:30 pm, ELL 302

Prerequisite CHEM 1023 or CHEM 1123 with a grade of C- or higher

Textbooks

1. Harvey, *Analytical Chemistry 2.0*, **2009**. [HTML] [DOWNLOAD]

Supplementary Textbooks

2. Dunnivant and Ginsbach, *Flame Atomic Absorbance and Emission Spectroscopy and Inductively Coupled Spectrometry - Mass Spectrometry*, **2012**. ISBN: 978-0-9882761-1-6 [DOWNLOAD]
3. Dunnivant and Ginsbach, *Gas Chromatography, Liquid Chromatography, Capillary Electrophoresis - Mass Spectrometry A Basic Introduction*, **2012**. ISBN: 978-0-9882761-0-9 [DOWNLOAD]
4. Skoog, West, Holler, Crouch, *Fundamentals of Analytical Chemistry*, 9*e*. Belmont, USA: Brooks Cole, **2013**. ISBN: 978-0495558286 (OPTIONAL)

Grading

Labs	20% †	
Assignments	10%	
Midterm1	10% ‡	Friday, January 27, 2017
Midterm2	10% ‡	Friday, February 17, 2017
Midterm3	10% ‡	Friday, March 24, 2017
Final Exam	40%	
TOTAL	**100%**	

†The penalty for late lab reports is a deduction of 20% of the maximum grade for every extra day or partial day. The laboratory is an integral part of the course. **You must earn a passing grade in the laboratory to pass the course.** Unexcused absences will result in a grade of zero for that particular laboratory session. Students with a valid excuse (e.g. illness) must contact the instructor at least one hour prior to the start of the lab to be excused. The weight of the lab will be transferred to the final exam. **Students who miss three or more labs will fail the course regardless of the excuse.**

‡**There are no make-up midterms**. If a midterm is missed with a valid excuse, the weight of the midterm transferred to the final exam. Programmable calculators are **not permitted** during midterms and exams. Students with a valid excuse (e.g.

illness) must contact their instructor at least one hour prior to the start of the midterm to be excused. **Students who miss all three midterms, regardless of the reason, will receive a failing grade in the course.**

Assignments

Weekly
Long answer

The penalty for late assignments is a deduction of 20% of the maximum grade for every extra day or partial day.

Description

The emphasis of this course is on the theory and applications of classical analytical techniques as well as evaluation of experimental results (analytical statistics). The following topics are included in this course: (i) an introduction to statistics relevant to analytical chemistry; (ii) theory and applications of classical analytical methods of gravimetry and titrimetry; (iii) an introduction modern analytical methods such as potentiometry, spectroscopy, and chromatography.

The knowledge gained in lectures will be applied during a laboratory practicum to acquire useful skills in the field of analytical chemistry. The training includes the use of basic chemical equipment such as volumetric glassware and analytical balances as well as more advanced instrumentation such as pH meters, UV-Vis spectrophotometers and Gas-Liquid Chromatography equipment. Some experimental data will be collected by a computer, interfaced to an instrument giving an opportunity to learn basic computerized data acquisition. Students will extensively use computers during their course work, and are expected to prepare all the laboratory reports as computer-generated printouts.

Accessible Learning Services

If you have a documented disability and require support or accommodations, please contact Dr. Abu Kamara, Coordinator, Accessible Learning Services at 902-585-1291, abu.kamara@acadiau.ca or Kathy O'Rourke, Disability Resource Facilitator at 902-585-1823, disability.access@acadiau.ca. Accessible Learning Services is located in the Rhodes Hall.

Academic Integrity

It is your responsibility to acquaint yourself with the university policy on academic integrity. Academic dishonesty such as cheating and plagiarism are not tolerated. Any form of academic dishonesty in examinations, tests, labs, or assignments is subject to serious academic penalty. The full description of the penalties associated with academic dishonesty is outlined in the 2016/2017 Undergraduate Calendar.