

UNIVERSITY OF CALGARY
DEPARTMENT OF CHEMISTRY
COURSE SYLLABUS
FALL 2014

COURSE: CHEMISTRY 311, Analytical Chemistry: Quantitative Analysis

LEC	DAY S	TIME	ROOM	INSTRUCTOR	OFFICE	PHONE	EMAIL	OFFICE HOURS
L01	TuTh	12:30-1:45	CHC 119	Dr. A. S. Hinman	SA 144B	220-6017	ashinman@ucalgary.ca	MoWeFr 12:00-1:00 TuTh 2:00-3:00

TEXTBOOK: Quantitative Chemical Analysis, D.C. Harris, 8th edition

TOPICS COVERED AND SUGGESTED READING:

Chapter 0, The Analytical Process

Chapter 1, Measurements

Chapter 2, Tools of the Trade

Note: The above three chapters should primarily be review. You should read them but, with the exception of parts of Sec. 1-2 and 2-3, they won't be covered in lecture.

Chapter 3, Experimental Error

Chapter 4, Statistics (Exclude sections 7-9)

Chapter 6, Chemical Equilibrium (Brief review)

Chapter 7, Activity and the Systematic Treatment of Equilibrium

Chapter 26, Precipitation Titrations, Sections 5, 6, 8

Chapter 8, Monoprotic Acid-Base Equilibria

Chapter 9, Polyprotic Acid-Base Equilibria

Chapter 10, Acid-Base Titrations

Chapter 11, EDTA titrations

(Note: Lectures may include material falling under the above topics but which is not included in the textbook.)

LABORATORY EXPERIMENTS:

Analysis for Sodium Carbonate

Analysis of an Acid Mixture

Soluble Chloride: The Volhard Titration

Copper in Brass

Ethylene Glycol

Determination of NTA

Calcium in Limestone

Department Approval: Approved by Department Head

Date: August 22 2014