

GRANDE PRAIRIE REGIONAL COLLEGE

DEPARTMENT OF SCIENCE AND TECHNOLOGY

DIVISION OF CHEMISTRY

WINTER 2002

CH 2130

Instructor: Barry Ramaswamy

Office: J218

Phone: Office: 539 2072 Home: 539 6239

Prerequisite: Chemistry 2110 or equivalent courses

Transfer Credits: U of Alberta, CH213 3 Credits

Lectures: Tuesday, Thursday 4.00 – 5.20 pm J202

Laboratory: Friday 1.00 – 5.50 pm

Text Book: Quantitative Chemical Analysis, 5th Edition
Daniel C. Harris, WH Freeman and Company, 1998Laboratory: Chemistry 213, Quantitative Analysis
B. Kratochvil and W.E Harris
University of Alberta, 2000COURSE EVALUATION

Quizzes	15%
Lab Work	40%
Midterm	15%
Final Examination	30%
Total	100%

Note:

Quizzes: There will be a quiz every week during the term. The first Quiz will be on Thursday, January 24, 2002. The Quiz will include Laboratory work and Lectures done in class. Attendance to the quizzes is compulsory. Absence due to illness has to be substantiated with a report from the nurse or the physician. Attendance to the Laboratory is Compulsory. Absence should be substantiated with a letter from the nurse or the physician.

SYLLABUS

1. Spectrophotometry.

A first look at Spectrophotometry. Simple spectrophotometer and Analysis using Spectrophotometers.

19-1, 19-2, 19-3, 19-4, 19-5,
20-1, 20-2, 20-3, 20-4, 20-6,

2. Laboratory Experiments.

All the Laboratory experiments will be explained in detail, with the theory and graphing techniques

3. Electrochemistry

Electrochemistry, Redox Titrations, Polarography and Ion Selective Electrodes

15-1, 15-2, 15-3, 15-4, 15-5, 15-6, 15-7
16-1, 16-2, 16-3, 16-4, 16-5, 16-6, 16-7,
17-1, 17-2, 17-3, 17-4, 17-5
18-1, 18-2, 18-3, 18-6, 18-8

4. Atomic Spectroscopy and Spectrometers

Instrumentation and Simple Analysis

21-1, 21-2, 21-3, 21-4, 21-5,
22-1, 22-2, 22-3, 22-4, 22-5

5. Introduction to Analytical Separations

Solvent Extraction and Analysis

23-1, 23-2, 23-3, 23-4, 23-5

6. Chromatography

Gas Chromatography, High performance Liquid Chromatography, Ion Exchange Chromatography

24-1, 24-2, 24-3, 24-5, 24-7
25-1, 25-2, 25-3, 25-4, 25-5,
26-1, 26-2, 26-4,

7. Literature Search