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## CHEM 1223: Chemistry 2

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### EFFECTIVE DATE

September 2016

### DEPARTMENT

UT Sciences

### DESCRIPTION

The second course of the CHEM 1121/1223 two-course sequence emphasizes the basic principles of chemical kinetics, chemical thermodynamics and organic chemistry. The laboratory in Chemistry 2 allows students to practice techniques learned in Chemistry 1. Students are expected to increase skills in making observations, recording data accurately, interpreting data and generating hypotheses. Both the lab and lecture portions need to be passed in order to pass the course. Chemistry 2 is designed for students seeking a degree or diploma in a field of science, technology, or health, among others. It is suitable as an elective course.

### CREDITS

4.0

### YEAR OF STUDY

1st Year Post-secondary

### PREREQUISITES

Chemistry 1 (CHEM 1121) with a minimum 'C-' grade

### COREQUISITES

None

### COURSE LEARNING OUTCOMES

Upon successful completion of this course, students will be able to:

- solve problems in chemical thermodynamics and chemical kinetics involving the physical properties of matter in the solid, liquid and gaseous states.
- describe the structure and reactivity of organic molecules.
- make use of careful measurement techniques and correct handling of data to solve typical problems of General Chemistry.
- work effectively with others in a laboratory situation through team-based learning.

## PRIOR LEARNING ASSESSMENT & RECOGNITION (PLAR)

None

## HOURS

Lecture: 60

Lab: 60

## INSTRUCTIONAL STRATEGIES

The course will be a combination of lectures, discussion, research, and presentation in a classroom and laboratory setting.

## GRADING SYSTEM

Letter Grade (A-F)

## PASSING GRADE

D

## EVALUATION PLAN

Type	Percentage	Assessment activity
Other	5	
Assignments	5	
Midterm Exam	30	2 midterms (both 15%)
Final Exam	25	
Lab Work	35	10 labs

## COURSE TOPICS

- General Chemistry ( Review energy, acid-base concepts, the equilibrium state)
- Thermodynamics: Entropy, Free Energy, and Equilibrium
- Chemical Kinetics
- Organic Chemistry: Bonding, Structure, and Reactivity

## LEARNING RESOURCES

None

Notes:

- Course contents and descriptions, offerings and schedules are subject to change without notice.
- Students are required to follow all College policies including ones that govern their educational experience at VCC. Policies are available on the VCC website at:  
<https://www.vcc.ca/about/governance--policies/policies/>.
- To find out how this course transfers, visit the BC Transfer Guide at <https://www.bctransferguide.ca>.

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### Broadway campus

1155 East Broadway  
Vancouver, B.C. Canada  
V5T 4V5

### Downtown campus

250 West Pender Street  
Vancouver, B.C. Canada  
V6B 1S9

### Annacis Island campus

1608 Cliveden Avenue  
Delta, B.C. Canada  
V3M 6P1

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