

# CHEMISTRY 123

Physical and Organic Chemistry



***Welcome to Chem 123!***  
***(section 201)***



Happy New Year!

HAPPY NEW YEAR

# Chemistry 123

## *Introduction to Physical and Organic Chemistry*

### Course goal:

**Understand**

*(really understand)*

**thermodynamics as well as organic  
structure and reactivity**

First six weeks: Physical chemistry

Second six weeks: Organic chemistry

# About Instructors

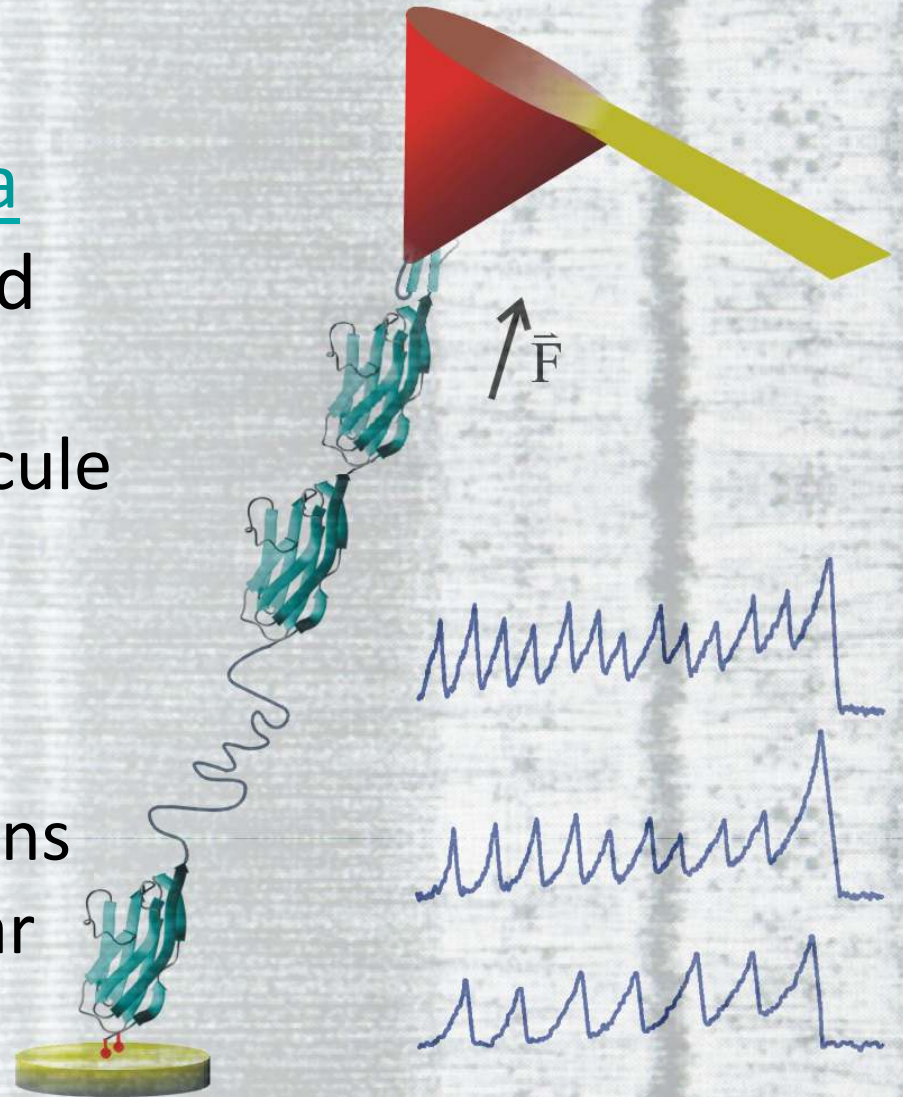
Hongbin Li

Chemistry/Physics A247

Email: [Hongbin@chem.ubc.ca](mailto:Hongbin@chem.ubc.ca)

Office hours: To be announced

Research interests: single molecule biophysical chemistry. I am particularly interested in how proteins fold and how the mechanical properties of proteins are determined at the molecular level. My main research tool is atomic force microscopy.



# About Instructors

Gregory Dake

Chem/Phys A341

Email: [gdake@chem.ubc.ca](mailto:gdake@chem.ubc.ca)

Research interests: Rearrangement Reactions;  
Terpene Synthesis; Metal-Catalyzed Annulations

# About Instructors

Gregory Dake

Chem/Phys A341

Email: [gdake@chem.ubc.ca](mailto:gdake@chem.ubc.ca)

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# About Instructors

Dr. Angela Crane

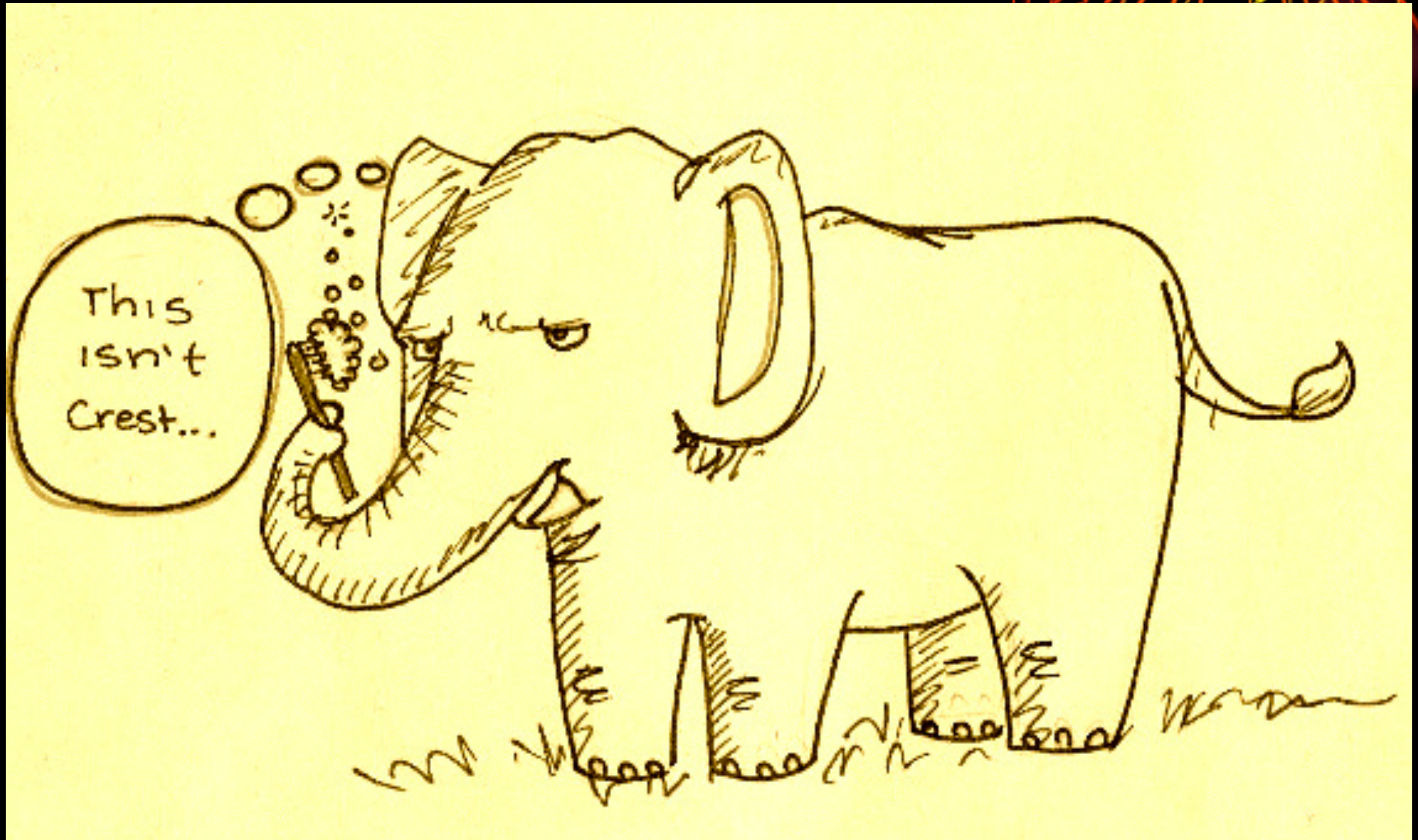
Office B356

Email: [acrane@chem.ubc.ca](mailto:acrane@chem.ubc.ca)

Chem123 demonstrator and coordinator

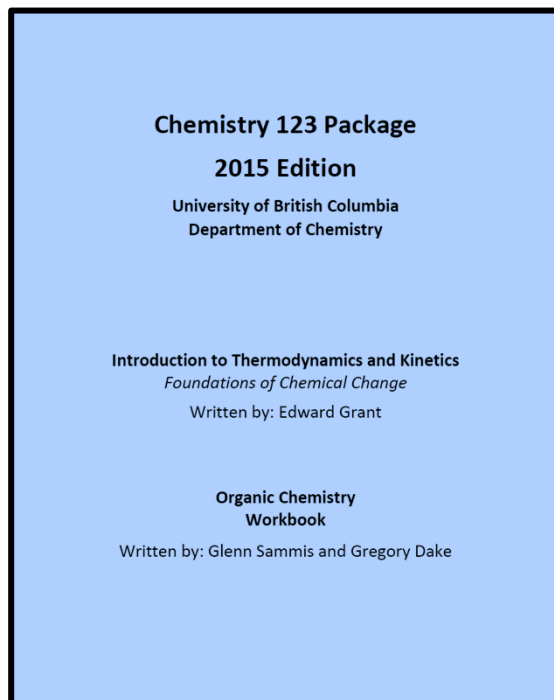
In charge of general course problems  
(connect fails, doctors notes, course-wide  
materials etc)

# Elephant toothpaste



# Chemistry 123

## Required



2015 Chemistry 123 Custom  
Course Package  
Includes:

- *Introduction to Thermodynamics and Kinetics*
- *Organic Chemistry Workbook*



The only calculator permitted  
for use on Chem 123 exams  
is the Sharp-EL-510RB

# Where to buy the 2015 Chem 123 Course Package?

The Chem 123 Course Package contains 2 texts:

- Introduction to Thermodynamics and Kinetics
- Organic Chemistry Workbook

These texts have ***significantly*** changed since previous years and contain more (and different) information than previous editions.

Please ensure that you have the 2015 edition ***only***.

The Chem 123 Course Package can be purchased from the Chemistry Graduate Student Society (CGSS) ***during the first two weeks of class only***.

Selling will take place in the Chemistry Building, room B150 and B250 during the following times:

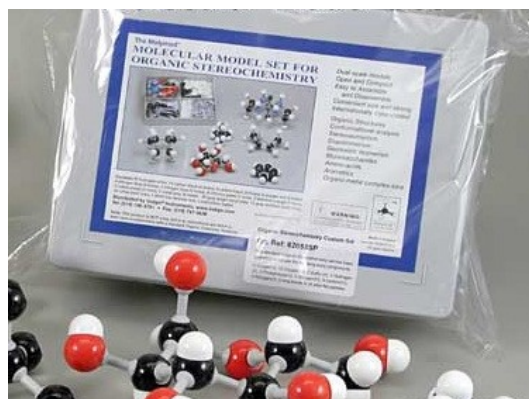
**Monday, Jan 5<sup>th</sup> to Friday, Jan 9<sup>th</sup>, 2015 – 5:30pm-7pm**

**Monday, Jan 12<sup>th</sup> to Friday Jan 16<sup>th</sup>, 2015 – 5:30pm-7pm**

The cost of the package is \$40. The CGSS will accept payments of cash and credit card. Note that credit payments will be subject to a card surcharge of \$1.50.

# Chemistry 123

## Recommended



We strongly recommend a model kit for the organic portion.  
You may use it during exams.

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**2014W2-CHEM123-201-Physical and Organic Chemistry**

UBC Instructor: Angela Crane; Gregory Richard Dake; Hongbin Li;

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**2014W2-CHEM123-All Sections-Physical and Organic Chemistry**

UBC Instructor: Gordon Bates; Angela Crane; Gregory Richard Dake; Kayli Johnson; Priya Anka Lekhi; Hongbin Li; Katherine Ryan; Glenn Sammis; Laurel Schafer;



Connect Site for all sections

# Chemistry 123

## Connect Site for the Lecture Component

The screenshot displays the user interface of the Chemistry 123 Connect Site. On the left is a navigation menu with items such as '2014W2-CHEM123-All Sections-Physical and Organic Chemistry', 'Home', 'Getting started: Course Information', 'Resource Centre', 'Exam Information', 'Chem 123 Package Solutions', 'Problem Sets', 'Section Specific Course Content', 'Online Assessments for ALL Sections', 'Online Quizzes for Physical Section', 'Online Quizzes for Organic Section', 'Who to Contact?', 'Copyright and Connect', 'UBC Chem 123 Facebook Discussion Group', and 'My Grades'. The main content area features a header with a phase diagram, the text 'CHEMISTRY 123 Physical and Organic Chemistry', and a ball-and-stick molecular model. Below the header are three panels: 'My Announcements' (showing no recent announcements), 'Calculator' (with a numeric keypad), and 'To Do' (showing 'What's Past Due' and 'What's Due' sections for the date 12/29/2014, with 'Nothing Due Today' listed).

All important information will be posted on the [Chem123-All Sections Connect Site](#) including:

- Course Information
- Resource Centre Hours and Schedule
- Problem Sets and solutions
- Solutions to Chem123 Course Package
- Exam Information
- Online Quizzes/Assessments
- Who to contact with course questions
- Link to UBC Chem Facebook Discussion Group

# Chemistry 123

## Problem Sets

- The physical chemistry text and the organic chemistry workbook have lots of questions for you to practice and test your conceptual understanding.
- The course will also provide problem sets and detailed solutions, as PDF documents on the Connect site.
- We will not mark problem sets as part of your final grade. But they are important. Use them to gain understanding, and learn what you don't know. Work the problems first before you check the solutions.
- **BEST WAY** to study and test yourself.

First-year Undergraduate Chemistry  
Resource Centre  
Room B357 (above B250)



**Opens January 19<sup>th</sup>, 2015!**

**The TA schedule will be posted on the door of the resource room  
and on Connect.**

# Grading Scheme

Review Online Assessments (2)	4%	}	Lecture
Section-specific Activities	6%		
Common Midterm Exam	20 %		
Common Final Exam	50%		
Laboratory	20 %	}	Laboratory
<b>TOTAL</b>	<b>100%</b>		

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**Faculty of Science Regulation:** *To pass the course, you must pass both the **lecture** and **laboratory** parts of Chemistry 123 independently*

# Chemistry 123

## Review Online Assessments

Worth 2% each of Final Grade

- Two on-line assessments:
  - Acid/Base Chemistry; (Physical Section)
  - Organic Nomenclature; (Organic Section)
- Both on-line assessments are required for all sections of Chem 123 and can be accessed through the Chem 123 Connect site

# Chemistry 123

## Acid/Base Chemistry Online Review Assessment

Worth 2% of Final Grade

- Two “Rounds”

- Round 1:

- **Opens Thursday January 8<sup>th</sup> and closes Thursday January 22<sup>nd</sup> at 11:59pm**
    - Unlimited Time
    - Unlimited Attempts
    - Worth 0.5% (You must achieve at least 70% on round 1 to get any credit)
    - Do NOT wait until the last minute to attempt the assessment!

- Round 2:

- **Opens Thursday January 23<sup>rd</sup> at 9am and is due Wednesday, February 4<sup>th</sup> at 11:59pm**
    - Limited time (~1.5 hour)
    - 2 attempts
    - Worth 1.5%

# Chemistry 123

## Midterm Exam

Worth 20% of Final Grade

**Wednesday, February 11, 6:30-7:30 pm**

Please make every effort to resolve conflicts on your own.  
If you have an unresolvable conflict you must email

[chem123midterm@chem.ubc.ca](mailto:chem123midterm@chem.ubc.ca)

by **Wednesday, January 28<sup>th</sup> @ 11:59 pm.**

Details of your conflict must be provided in your email.  
All UBC Internal conflicts will be checked.

# ••••• CHEM 123 Labs •••••

Lab Check-In is the week of **Jan 5<sup>th</sup>** for 'Group A' and the week of **Jan 12<sup>th</sup>** for 'Group B'. Please come to your assigned lab section that week.

Bring your Lab Manual with you. New students can purchase the [2013/14](#) lab manual at the Bookstore. The check-in will take 3 hours and your attendance is mandatory.

Please check the Chem 123 **Laboratory Connect** on Monday, January 5<sup>th</sup> to find out which Group you are in and where to go for Lab Check-In. This information will be updated daily for the next day lab.

All students must view the on-line Lab Orientation slide show and the Safety video before coming to the lab for Check-In. The presentations are located on the [Laboratory Connect](#) site.

2013W2-CHEM123-All Labs-Physical and Organic Chemistry

Announcements

Getting Started

Lab Schedules

Make-up Procedures

Library Research

Taking Observations

Course Glossary

Discussions

Experiments

- Experiment 9
- Experiment 10
- Experiment 11
- Experiment 12
- Experiment 13

My Grades

COURSE MANAGEMENT

## Chemistry 123 Laboratory

### Getting Started

Welcome to Chemistry 121 Laboratory!

#### Chemistry 123 Laboratory Check - in Information

We will be dividing the entire CHEM 123 lab class into two halves. The first half (Group A) will attend the lab during the week of January 7 - 10 for check-in and a 3 hour lecture/in-lab assignment (which is worth 5 marks). The second half (Group B) will attend during the week of January 14 - 17. Everyone please show up to whichever lab section you have registered into.

Please check the [Check-in](#) information on this page **one day before your designated lab time**, starting Monday January 6<sup>th</sup>, to find out which group you have been assigned to.

**Important:** All section changes must be completed by Thursday, Jan 3<sup>rd</sup>, through Student Service Centre. Spaces are limited in most sections. If you are unable to self-register, please click [here](#).

#### Check-in information

Access your Check-in information here during the week of 6 January, one day before your scheduled lab time.

Bring your **lab manual, safety glasses and lab coats** to your first lab session.

# Section-Specific Activities

## Physical Section (1.5 %)

There will be 2 online quizzes for the Physical section of the course. The dates for these quizzes are:

- Quiz #1 opens Friday, January 23 at 9am and closes Monday, January 26 at 11:59pm
- Quiz #2 opens Friday, February 6 at 9am and closes Monday, February 9 at 11:59pm

# Our Physical Section-Specific Activities

## Physical Section (1.5 %)

- Clicker questions during the lecture
- Quiz: five in total, time will be announced in due time.  
Clicker required to enter answers
- Register Clicker by Friday January 9<sup>th</sup> on section 201  
Connect Site

# Our Physical Section-Specific Activities

## Physical Section (1.5 %)

- Around 12 lectures with Clickers: will count only 8 out of 12
- If have Clickers by next lecture: BONUS MARKS!
- If no Clicker on quiz day, can hand in paper copy.
- Will count best 4/5 quizzes.

# How to be successful in Chem123?

## A few words...

- Do the reading assignment: engagement is so much easier if you know what we are discussing
- Attend lectures and take notes
- Do problem sets by yourself
- Form study groups
- Seek help in Chem123 Resource Center or go to my office during my office hours!!!