

CHEM 3103 PHYSICAL CHEMISTRY II

September 2015

Instructor: Dr. Anthony Z. Tong, Office: ELL324

Lectures: 10:00-10:30AM, Tuesday & Thursday, ELL109

Laboratory: 1:30-4:30PM, Tuesday, ELL302, ELL109

Office hours: 1:30PM-3:30PM, Thursday

Text: Physical Chemistry, Peter Atkins, 9th Ed.

Prerequisites: Chemistry 2103

Chemistry 3103 provides an introduction to chemical kinetics. Approximately 1/2 of the course is concerned with the kinetic theory of gases and its relation to transport properties in liquids and gases. Approximately 1/2 of the course will examine chemical reaction kinetics, both from the standpoint of interpreting experimental data and in terms of the theoretical treatment of reactive encounters between molecules. The course outline includes most of Part 3 of the text.

Physical chemistry is an interdisciplinary subject which draws heavily upon mathematics and physics in obtaining rigorous, quantitative descriptions of chemical systems. Students will be expected to know the basic concepts of physics that are generally covered in a first year university physics course and to be able to make basic physical measurements in the laboratory with minimal instruction. Students will also be expected to be proficient in elementary differential and integral calculus and to be able to use it in solving problems.

The laboratory work consists of five experiments conducted independently and requiring a formal report written individually. The laboratory work counts for 25% of the final grade in the course with the added provision that students who do not pass the laboratory part of the course will receive a failing grade in the course. The laboratory reports are due at the last day of classes for the term. No report will be accepted after that.

Marking:

- Assignments 10%
- Lab 25%
- Midterm 30%
- Final 35%