

FLORIDA INTERNATIONAL UNIVERSITY
CHM3411 - PHYSICAL CHEMISTRY II
SPRING 2019

Instructor: Jeff Joens
Office: CP 331; phone 348-3121 (voice mail)
Web page: www.joenschem.com

Time: M,W,F noon to 1:15pm
Room: SIPA-220
e-mail: joensj@fiu.edu

Office hours: To Be Announced

Course objective: To provide, along with the companion course CHM3410, a two semester sequence of classes dealing with important concepts in physical chemistry.

Prerequisites: Math, up to MAC 2312 (Calculus 2); Physics, up to PHY 2049/L (Physics 2); Chemistry, up to CHM 3120/L (Introduction to Analytical Chemistry).

Text: P. Atkins, J. de Paula, Physical Chemistry, 10th Edition (New York: W. H. Freeman, 2014 - ISBN 13:978-1-4292-9019-7), plus handouts.

Grading:	3 hour exams (100 points each)	300 points
	Homework	50 points
	Final exam (comprehensive)	<u>200</u> points
	TOTAL	550 points

- Notes:
- 1) Final grades will be based on total accumulated points.
 - 2) The final exam will be comprehensive. You must take the final exam to pass the course.
 - 3) Exams will be open handouts (excluding problem sets), including a summary sheet I will provide. You may also bring one page of notes to the exam (8.5" x 11", double sided). You should bring a calculator to the exam. The grading scale for each exam will be given when the exams are returned.
 - 4) Excused absences from exams will be by permission of the instructor only. If you are forced to miss an exam, you are expected to notify me in a timely manner.
 - 5) Homework assignments will be given once a week, and will be collected and graded. Late homework will not be accepted. Your five highest grades on homework will be used to determine your homework grade, which represents 50 points towards the final grade in the class. Homework solutions will be available on my web page (www.joenschem.com) as will old exams and copies of course material.
 - 6) Cheating or assisting other students in cheating is a violation of University policy and will be punished. For further information on what constitutes cheating and the University policies that apply please refer to the University Code of Academic Conduct.
 - 7) You are expected to retain old exams and homework for your records until after final course grades have been given.
 - 8) As per University policy, a grade of incomplete will only be given "...for work not completed because of serious interruption not caused by the student's own negligence." An incomplete will only be given after consultation with me and a written agreement outlining the reason for the incomplete and a timetable for making up the missing work.

Tentative course outline

Chapter 7 - Introduction to Quantum Theory

Chapter 8 - The Quantum Theory of Motion

First Hour Exam, Friday, February 8th

Chapter 9 - Atomic Structure and Spectra

Chapter 10 - Molecular Structure

Chapter 11 - Molecular Symmetry

Second Hour Exam, Friday, March 8th

Chapter 12 - Rotational and Vibrational Spectra

Chapter 13 - Electronic Transitions

Chapter 14 - Magnetic Resonance

Third Hour Exam, Friday, April 12th

Chapter 15 - Statistical Thermodynamics

FINAL EXAM: Friday, April 26th (9:45am to 11:45am)

The above course outline is rather ambitious, and we may in fact not cover all of the topics listed. If there are any changes to the above outline (material covered for an exam, for example) they will be announced at least one week before an exam is given.