

**CHEM 110/108: SPRING 2013: T R 10:50 AM-12:05 PM
49 Smeal Building**

T 12:15-1:05 PM (Chem 108) 49 Smeal Building

TEXT BOOK: CHEMISTRY THE CENTRAL SCIENCE

BROWN & LEMAY, 12TH EDITION, 2012

REQUIREMENTS: SCIENTIFIC CALCULATOR, BASIC ALGEBRA BACKGROUND

INSTRUCTOR: MR. VINCENT CALABRESE (vtc101@psu.edu)

OFFICE: ROOM 225 SWIFT BUILDING

PHONE: 814-375-4733

OFFICE HOURS: Thursday 12:10-1:00 PM

COURSE WEBSITE: www.psduboischem110.homestead.com

Course Description & Objectives

The focus is to understand the concepts of basics of chemistry that include naming of compounds, writing of formulas, application of dimensional analysis method for problem solving, limiting reactant, dilution and titration problems, calculating heat of reaction by applying different methods, predicting structures and shapes, polarity of molecules & bonds, electron and molecular configuration, bond order calculation, gas laws, introduction to organic & biochemistry.

Disabilities

Note to Students with Disabilities

Penn State DuBois welcomes students with disabilities into the University's educational programs. If you have a disability-related need for modifications or reasonable accommodations in this course, please contact The Office for Disability Services, Diana Kreydt, 142 Smeal Building, at 372-3037 or dlk34@psu.edu.

For further information regarding the Office of Disability Services, visit their web site at www.equity.psu.edu/ods. Instructors should be notified as early in the semester as possible regarding the need for modification or reasonable accommodations.

GRADING PROCEDURE:

CLASS PERFORMANCE: 3% EXTRA CREDIT WILL BE ADDED TO YOUR FINAL GRADE SHOULD YOU BE PRESENT FOR AT LEAST 80% OF ALL CLASSES.

Students must contact the instructor as soon as possible if they anticipate missing one or more classes due to events such as chronic illnesses, travel related to team sports, or other university activities. E-mail is the best way to contact me. (vtc101@psu.edu)

Chem 108:

Exams: 75%, HW 20%, attendance and class performance (attendance) 5%
[0.75 (% Exam average) + 0.20 (% HW) + 0.05 (# attended/total classes)]

Chem 110

Exams 1-4 (Each 50 pts, **drop lowest**): 150 pts. total

Exam on selected topics (Final): 50 pts.

Homework: 5 pts. Per Chapter, 2 or 3 problems selected from listed (50 pts total)

Must be completed in pencil and stapled if needed.

Class attendance, Participation: up to 3% (extra, see above description)

GRADING SCALE:

A	91-100%	C+	71-75%
A-	88-90%	C	60-70%
B+	84-87%	D	50-59%
B	80-83%	F	0-49%
B-	76-79%		

MAKE-UP EXAM: These are allowed only on medical grounds or in unavoidable situations. In either case, the instructor should be informed on or before the exam date. Please see me on campus or send me an e-mail to schedule a make-up exam .

EXAM TYPE: Multiple choice type exams will be given. All relevant work has to be shown on a separate sheet. **BRING A PENCIL AND A CALCULATOR.**

ACADEMIC INTEGRITY: All students are expected to act with civility, personal integrity; respect other students' dignity, rights and property; and help create and maintain an environment in which all can succeed through the fruits of their own efforts. An environment of academic integrity is requisite to respect for self and others and a civil community.

Academic integrity includes a commitment to not engage in or tolerate acts of falsification, misrepresentation or deception. Such acts of dishonesty include cheating or copying, plagiarizing, submitting another persons' work as one's own, using Internet sources without citation, fabricating field data or citations, "ghosting" (taking or having another student take an exam), stealing examinations, tampering with the academic work of another student, facilitating other students' acts of academic dishonesty, etc.

Students charged with a breach of academic integrity will receive due process and, if the charge is found valid, academic sanctions may range, depending on the severity of the offense, from F for the assignment to F for the course.

The University's statement on academic integrity, from which the above statement is drawn, is available at <http://www.psu.edu/dept/oue/aappm/G-9.html>

CELL PHONE USE: Behaviors that disrupt other students' learning are not acceptable (e.g., arriving consistently late for class; cell phone use, reading non-course related materials, or social conversation during class), and will be addressed by the instructor.

Cell phones should be turned off during class and not brought on exam days.

SYLLABUS AND EXAM DATES:

HOMEWORK PROBLEMS

- 1/8, 10 CH 1: Matter and Measurement
CH 1: 11, 13, 14, 25, 28, 39, 47, 51, 68, 70
- 1/15, 17 CH 2: Atoms, Molecules, and Ions
CH 2: 11, 15-17, 22-25, 31, 35, 37, 38, 45, 55, 56, 63, 65, 69, 97, 106
- 1/22, 24 CH 3: Stoichiometry
CH 3: 4, 11, 19, 21, 23 a-c, 25 a + b, 33, 35, 37, 39, 52, 53, 57, 61, 67 a + b, 72, 75, 81
- 1/29 **Finish Stoichiometry/Begin Review for Exam I.**
- 1/31 **Review: Exam 1 (Ch 1 & 2) on 2/5**
- 2/5 EXAM I (Ch 1 & 2)**
- 2/7, 12 CH 4: Aqueous Reactions and Solution Stoichiometry
CH 4: 19, 21, 23, 29, 39, 49, 51, 61, 63, 69, 72, 79, 81
- 2/14 Review Ch 4 for **Exam II (Ch 3& 4) on 2/21**
- 2/19 Exam 2 (Ch 3 & 4), CH 5**
- 2/21, 26 CH 5: Thermochemistry
CH 5: 4, 5, 8, 43, 44, 46, 53-56, 63-65, 69, 73

3/4, 6 SPRING BREAK: NO CLASSES

- 2/28 Begin CH 6: Electronic Structure of Atoms
CH 6: 17, 23, 27, 31, 38, 41, 43, 53, 55-58, 65, 66, 98
- 3/12 Finish CH 6: Electronic Structure of Atoms
- 3/14 **Review for Exam 3 on 3/19.**
- 3/19 **Exam 3 (Ch 5 & 6)** CH 7: Periodic Properties of Elements
- 3/21, 26 CH 7: 12, 15, 23, 28, 35 a, b, d, 47, 53, 71
- 3/28, 4/2, 4 CH 8: Basic Concepts of Chemical Bonding
CH 8: 21-23, 47, 48, 51, 52, 55, 56, 63, 64, 69-71
- 4/9 **Review for Exam 4 on 4/11.**
- 4/11 **Exam 4 (Ch 7 & 8)**
- 4/16 CH 9: Molecular Geometry and Bonding
CH 9: 12, 15-17, 19, 21, 27 a-d, 28, 35a
- 4/18, 23 CH 10: Gas laws
CH 10: 22, 24, 28, 30, 32, 34, 36, 41, 42, 49-51, 53, 58, 66, 72, 84
Intermolecular Forces,
As time allows: CH 11: 6, 7, 17, 19, 21a, c, 27, 51, 57, 59
CH 15: CHEMICAL EQUILIBRIUM (Le Chatlier's, Q) CH15: 15, 61, 62
- 4/25 **Review for Final Exam**
- Week of Final Exams: 4/29-5/3 Exam on selected topics (Not cumulative).**

