



CHM2045: General Chemistry I

for PHPB (<http://www.clas.ufl.edu/prehealthpostbac/>)

Section 16AD

Fall 2014 (Aug 25 – Dec 10)

(3 Credit Hours)

M WR Period 9 16:05 - 17:00 LEI 142

Textbook: Course content will follow:

Petrucchi *et al* "General Chemistry:...", 10th Ed. Pearson publishing has provided our section with free hardcopy and eBook access to this title. Other sections of CHM2045 will be following a different text (Silberberg 6e) which could be useful as an additional reference, if available.

Instructor: PJ Brucat

Office Location: LEI214A

Office Hours: by appointment

Contact info: Use Canvas Messaging, [please](#)

Course Website: <https://ufl.instructure.com/courses/265357>

Tentative Syllabus

(for exact ordering and schedule of lectures, see the course website)

An Introduction to Matter

Measurement and Units
Compare and Contrast the Macroscopic and Microscopic scales
The Scientific Method
Atoms and the Periodic Table
Stoichiometry and the Chemical Equation
Molecular Nomenclature
Solutions and Intermolecular Forces
Thermochemistry and Energy Conservation

Chemical Bonding and Electron Rules

Light, Quantum Theory, and Atomic Structure
Chemical Bonding Structure and Energetics
Lewis Structures VSEPR Average BDE Resonance MO Theory

Molecular Motion, Kinetics, and Dynamic Equilibrium

Phase Equilibrium
Gases Solids Liquids Supercritical Fluids
Time Dependence of Chemical Processes
Elementary Processes Reaction Mechanisms Temperature Dependence
Equilibrium as Rate Balance
The Equilibrium Expression LeChatlier van't Hoff

Chemical Equilibrium

Chemical Driving Forces Free/Available Energy Entropy

FALL SEMESTER 2014

	S	M	T	W	T	F	S
Aug.	17	18	19	20	21	22	23
		Registration					
		Drop/Add					
	24	25	26	27	28	29	30
	31						
Sept.		Holiday	1	2	3	4	5
	7	8	9	10	11	12	13
	14	15	16	17	18	19	20
	21	22	23	24	25	26	27
	28	29	30				
Oct.				1	2	3	4
	5	6	7	8	9	10	11
	12	13	14	15	16	17	18
		Homecoming					
	19	20	21	22	23	24	25
	26	27	28	29	30	31	
Nov.							1
	2	3	4	5	6	7	8
	9	10	Holiday	11	12	13	14
	16	17	18	19	20	21	22
	23	24	25	26	27	28	29
	30						
Dec.		1	2	3	4	5	6
	7	8	9	10	11	12	13
		Reading Days					
	14	15	16	17	18	19	20
		Commencement					
	21	22	23	24	25	26	27
		Grades Due					
	28	29	30	31			

IDENTIFICATION SYMBOL:

Classes ☐ Exams ☐

This course is different from others at UF

First of all, there is you. You are taking this course as a participant in a new opportunity at UF, the Pre-Health Post-Baccalaureate program. That makes you and your cohorts different than the rest of the students at UF taking General Chemistry courses. Make that count.

The course website / Learning Management System (LMS): < <https://ufl.instructure.com/courses/265357> > is also different from many other courses on the UF campus. Most other UF courses on campus are still use the Sakai/eLearning LMS for their course website. We will not. We will use a system called Canvas to which all UF courses will eventually move. Canvas is superior to Sakai, but it is new to UF. That means that there will be some “growing pains” as with everything new. We hope you will indulge us with your patience.

This class is “flipped”. Recent studies in higher education conclude that the lecturing process (“sage on the stage”) is rather an inefficient method of teaching, because it lacks engagement of the student and, thereby, active learning. So, we will eliminate the lecture and ask you, the student, to do what would traditionally occur in lecture (assimilate content) at home. Then we will do what a normal class would do at home (work problems, question the validity and consistence of the content) in class. Hence, the term “flipped” class.

Classwork

We are going to learn Chemistry as a team. Therefore, your timely presence in our class meetings is kindly requested. Your activities in our class meetings will be graded and this grade used in the course grade computation (see below). If you cannot attend class due to a medical/justifiable reason, contact your Instructor in advance using the Canvas website messaging tool.

Office Hours with Brucat

Office hours held by your Instructor are intended for one-on-one discussions with students. Typical discussion topics are the student's standing in the class (grades), learning strategy and habits, arrangement for unavoidable absences, special accommodations due to disability, and any other things not appropriate for the group discussion. These meetings will be held at times *you arrange*. If you want a meeting of this sort, message your Instructor (using Canvas) 3 (three) options for meeting times that are convenient for you, and your Instructor will message back with the choice that works. This procedure avoids a protracted back and forth negotiation, and has proven to be quite efficient.

Exams

There will be **five** exams during the term, to be held during our scheduled class meeting time on the following days:

09/15 10/06 10/27 11/17 12/08

Any anticipated conflict should be reported to your Instructor immediately.

Cumulative Final Exam

Exam Group 13F **Saturday, December 13, 20:00 - 22:00**

It is anticipated that the room for the exam will be LEI 142. This is to be confirmed.

The General Chemistry Exam Absence policy: http://iteach.chem.ufl.edu/Exam_Absence_Policy_GChem_s13.pdf

See also: <https://catalog.ufl.edu/ugrad/current/regulations/info/exams.aspx>

Course Grade Computation

Your course letter grade will be derived from the weighted average of your performance in the three graded assignment categories, Classwork, Online Quizzes, and Progress Exams, as follows:

5 Exams at 100 points plus Final at 200 points	60%
Classwork	20%
<u>Online Quizzes</u>	<u>20%</u>
Total	100%

Your course grade will be determined from your course performance percentage as follows:

80%	A
77%	A-
73%	B+
70%	B
67%	B-
63%	C+
60%	C
50%	D
< 50%	E

UF's Grading Policy: <http://www.registrar.ufl.edu/catalog/policies/regulationgrades.html>

Getting Help

For quickest response, you might find posting questions to the Canvas Discussion Board might be a good choice. Messaging the Instructor, or even a classmate also works.

For Username/Password issues, such as difficulties logging into any Gatorlink-authenticated site at UF, (including our course website), please contact the UF Help Desk at:

helpdesk@ufl.edu

(352) 392-HELP - select option 2

<https://lss.at.ufl.edu/help.shtml>

Quality of Life

Resources are available at <http://www.distance.ufl.edu/getting-help> such as:

[Counseling and Wellness resources](#)

[Disability Resources](#)

[Online Library Help Desk](#)

[Dean of Students Office](#)

University Policy on Accommodating Students with Disabilities

Students requesting accommodation for disabilities must first register with the Dean of Students Office (<http://www.dso.ufl.edu/drc/>). The Dean of Students Office will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation. You must submit this documentation prior to submitting assignments or taking the quizzes or exams. Accommodations are not retroactive, therefore, students should contact the office as soon as possible in the term for which they are seeking accommodations.

University Policy on Academic Misconduct

Academic honesty and integrity are fundamental values of the University community. Students should be sure that they understand the UF Student Honor Code at <http://www.dso.ufl.edu/students.php>.

This course satisfies the General Education requirement in the Physical Sciences

Physical Science General Education Program Objectives

Physical science courses provide instruction in the basic concepts, theories and terms of the scientific method in the context of the physical sciences. Courses focus on major scientific developments and their impacts on society, science and the environment, and the relevant processes that govern physical systems. Students will formulate empirically-testable hypotheses derived from the study of physical processes, apply logical reasoning skills through scientific criticism and argument, and apply techniques of discovery and critical thinking to evaluate outcomes of experiments.

These objectives are accomplished through active participation in the carefully designed course activities, interaction and communication with the teaching staff and peers, and individual, but guided, effort by the student.

General Education Student Learning Outcomes

Area	Institutional Definition	Institutional SLO
CONTENT	Content is knowledge of the concepts, principles, terminology and methodologies used within the discipline.	Students demonstrate competence in the terminology, concepts, methodologies and theories used within the discipline.
COMMUNICATION	Communication is the development and expression of ideas in written and oral forms.	Students communicate knowledge, ideas, and reasoning clearly and effectively in written or oral forms appropriate to the discipline.
CRITICAL THINKING	Critical thinking is characterized by the comprehensive analysis of issues, ideas, and evidence before accepting or formulating an opinion or conclusion.	Students analyze information carefully and logically from multiple perspectives, using discipline specific methods, and develop reasoned solutions to problems.

Naturally, all three areas of learning outcomes will be assessed in all categories of graded assignment administered in CHM2045.

We, the members of the University of Florida Community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity

Disclaimer for this document

Note: All aspects of course operations, including grading and all aspects of course policy and policy execution, are subject to change at the whim and caprice of the course instructor.