

# CHM2046 GENERAL CHEMISTRY II SPRING 2016

3 CREDITS

Lectures: MWF PERIOD 5; starts 11:45 a.m. (CLB 130)

DISCUSSION SECTIONS: Tuesdays (period and room depends on section number,  
<http://www.registrar.ufl.edu/soc/201608/all/chemistr.htm>)

**INSTRUCTOR:** Mr. Matthew Burg  
email through Canvas only (for administrative purposes)

**OFFICE HOURS:** MWF period 4 in the CLC; starts 10:30 (either FLI 257 or FLI 258).

**REQUIRED MATERIALS:** ebook and .pdf version of text (General Chemistry, Vining);  
TopHat subscription required.

**COURSE SCHEDULE:** (the lecture schedule is tentative, but exam dates will not change)

Dates	Topics	Chapters
08/22-08/26	Chemical Equilibria	15
08/29-09/07	Acids and Bases	16
09/07-09/16	Advanced A/B Equilibria	17
09/19-09/26	Precipitation; Lewis A/B	18
09/28-10/07	Thermodynamics	19
10/10-10/28	Electrochemistry	20
10/31-11/07	Organic	21
11/09-11/16	Main Group	22
11/18-11/30	Transition	23
11/30-end	Nuclear	24

**EXAM DATES:** 09/22, 10/18, 11/16, all @ 8:20-10:20 pm; cumulative final exam 12/12  
@ 3-5 pm.

**HOLIDAYS (NO CLASSES):** 9/5, 10/14, 11/11, 11/23-11/25

**COURSE INFORMATION:** CHM2046 and CHM2046L constitute the second semester of the two term sequence of General Chemistry, CHM2045/2045L – CHM2046/2046L. Prerequisite information and credit suitability can be found in the Undergraduate Catalog. Requirements for class attendance and make-up exams, assignments, and

other work in this course are consistent with university policies that can be found at:  
<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

**COURSE OBJECTIVES:** As both a general education requirement and major's course, CHM2046 serves to teach the scientific method, skills for problem solving, general chemistry knowledge, and a connection to the principles that govern the natural world.

**GRADES:** Grades for the term will be determined as follows:

Progress exams (best 2 of 3)	2 @ 25% each = 50%
Final cumulative exam	30%
Online homework (MindTap)	10%
Clickers (TopHat) and worksheets	10%
<b>TOTAL</b>	<b>100%</b>

The grade cutoffs are as follows (these are firm):

A	A-	B+	B	B-	C+	C	D+	D	D-	E
90	86	83	80	76	73	70	66	63	60	<60

Information on current UF grading policies for assigning grade points can be found at:  
<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

**CANVAS (HTTP://ELEARNING.UFL.EDU):** AHere you will find the syllabus, a link to MindTap (the ebook/homework), your gradebook for the class, lecture videos, files, announcements, and other pertinent information. It is your responsibility to check Canvas often to make sure that you do not miss important announcements and other information, and to ensure that your gradebook is accurate. For computer assistance, visit <http://helpdesk.ufl.edu/>.

**MINDTAP:** Ten percent of the course grade will be based on online homework assignments through MindTap, which is accessible through links in our course in Canvas. They will be due the day after each class period; following each class. The points for each assignment are displayed in MindTap and can only be earned if they are answered before the displayed due date. Of the points available in MindTap (currently ~663), there will be 90% of this number of points possible – i.e. if you earn 597 points and 663 are available, you will earn 100% in this grading category. The point values may change (we may cover less than this), but the 90% rule will stand. You can always view your score in MindTap. Final grade adjustments to reflect the difference in points possible/available will be made in Canvas at the end of term. Extra points earned of those available will not affect your grade (there are no bonus points).

There will be no extensions for travel, etc. on MindTap assignments; the 90% rule accounts for unexcused absences.

**CLICKERS AND WORKSHEETS:** Ten percent of the course grade will be based on performance on in-class clicker questions and in-discussion worksheets. You can earn points in class by correctly answering clicker questions through TopHat (0.5 pts for participation, and 0.5 pts for each correct answer). You can also earn points by completing worksheets in the discussion sections. You can earn up to 100 total points through both of these combined scores. You can review your running total in Canvas; an aggregate grade will be entered in Canvas at the end of term.

**DISCUSSION CLASSES:** The Discussion Classes meet each week beginning 8/29 and your attendance is expected. Your discussion sections will contain weekly worksheets that will count toward your overall grade. The points available may vary by worksheet. You must go to your assigned discussion section to receive credit for the worksheet. If you are more than 5 minutes late, then you will not receive credit. You must show your work to your TA to receive credit, and you must attend your section's discussion class to receive credit.

**CONTACTING THE INSTRUCTOR/OFFICE HOURS:** Emails are for administrative purposes only, and not for distance instruction. Emails should only be directed through Canvas; emails otherwise received may not receive a response. All academic inquiries must be made during office hours or before/after lectures (time permitting). If this is not possible, visit the Chemistry Learning Center. Please be prepared before coming to office hours, bring specific questions and your previous work.

## EXAM POLICIES:

**EXAMS:** Exams will be taken in the evenings outside of class, and the Exam Room Assignments will be posted in Canvas prior to each exam date. You must use a non-graphing non-programmable scientific calculator on exams (with log, ln, root, and exponent functions). Be sure to bring pencils, erasers, section number, and your UF ID card. No notes, papers, cell phones or other electronic devices can be in view during exams.

No makeup ("do over") progress exams will be given for any reason. Conflict exams will be administered for officially sanctioned events and medical reasons as per university policy and the General Chemistry Exam Absence Policy: [https://www.chem.ufl.edu/wp-content/uploads/sites/38/2015/07/exam\\_absence\\_policy\\_gen\\_chem\\_s13.pdf?610c64](https://www.chem.ufl.edu/wp-content/uploads/sites/38/2015/07/exam_absence_policy_gen_chem_s13.pdf?610c64)

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

If you must be absent for an exam due to a documented and approved academic or UF athletic conflict, bring the documentation to your instructor at least one week prior to the scheduled exam and an early conflict exam will be scheduled for you.

To alleviate the stress of potential issues that do not fall under officially-sanctioned absences, we've incorporated an "average/replace" policy (the lowest of the three progress exams will be replaced by the average of the three progress exams). This "average/replace" policy will help to minimize the impact of a single poor performance but it will not completely disappear.

Any and all exam grade disputes or Scantron confirmations must be performed within two weeks of the scheduled exam date. Bubbling errors will not be negotiated, and a 5 point penalty will be applied for failure to bubble in a form code, UFID, or not taking the exam in the assigned room.

## UF POLICIES:

**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 exams. Accommodations are not retroactive, therefore, students should contact the office as soon as possible in the term for which they are seeking accommodations. The student is responsible for scheduling the exam dates with the DRC.

**UNIVERSITY POLICY ON ACADEMIC MISCONDUCT:** As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge: "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity." You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida. The following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, papers, quizzes,

exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see: <http://www.dso.ufl.edu/SCCR/honorcodes/honorcode.php>.”

**FEEDBACK:** Students are expected to provide feedback on the quality of instruction in this course based on 10 criteria. These evaluations are conducted online at <https://evaluations.ufl.edu>. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu>.

## TUTORING/CHEMISTRY HELP:

The Chemistry Learning Center (CLC) is located in Keene-Flint Hall rooms 257 and 258. Chemistry graduate students offer free help, usually weekdays between periods 2-9.

The [UF Teaching Center](#) has free walk-in help, or you can schedule an appointment. You can also watch interactive practice exams from similar chemistry courses.

## GENERAL EDUCATION

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 participation in the course lectures and discussion sections, and individual work done on homework assignments and assessments.

## GENERAL EDUCATION STUDENT LEARNING OUTCOMES:

Area	Institutional Definition	Institutional SLO
<b>CONTENT</b>	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.
<b>COMMUNICATION</b>	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.
<b>CRITICAL THINKING</b>	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 CHM2046.

### SPECIFIC GOALS OF CHM2046:

You will be required to analyze scientific concepts and think critically. This means being able to answer both quantitative (mathematical) and conceptual (quantitative) multiple choice problems in a limited period of time. Additionally, you will have to write or orally communicate during your discussion periods. We will also demonstrate how these topics can be applied to the scientific method and how observation and experimentation leads us to the development of scientific theories. To achieve this, students will be introduced to the following concepts from the text:

You will review the importance of chemistry in our everyday lives. You will be required to utilize the methods of science as a logical means of problem solving through critical thinking. This means you must analyze information carefully and logically from multiple perspectives, using discipline specific methods, and develop reasoned solutions to problems. To ensure your competency in these concepts you will be required to complete online homework assignments and take quizzes and exams that require critical thinking, analysis of problems, and drawing conclusions.

Disclaimer: This syllabus represents my current plans and objectives. As we go through the semester, those plans may need to change to enhance the class learning opportunity. Such changes, communicated clearly, are not unusual and should be expected.