

# Chemical Principles I – SCIE 5355-001 – Fall 2012

## Instructor

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Office Hours: by appointment

## Schedule

Wednesday, 6:10 to 9:00 pm in Room 138 LS

## Description of Course Content

The fundamentals of atomic structure, chemical bonding, the periodic table, nomenclature, gas laws, chemical equations, and solutions. The course will be supplemented with laboratory demonstrations devoted to chemical problem-solving, library and Internet resources, chemical ethics, etc.

## Important Dates

October 31 Last day for "W" grade  
December 5 Last day of classes  
December 12 Final Exam

## Course Materials

*Principles of General Chemistry*, 3rd Edition, Silberberg **required**  
(1<sup>st</sup> or 2<sup>nd</sup> editions acceptable.)  
*Student Solutions Guide*, 3rd Edition, Silberberg **optional**

## Grading

WebAssign Homework	20%
Lab Lesson Plan	10%
Tests (4)	70%

A	≥85%	B	≥75%	C	≥65%	D	≥55%
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Students are expected to keep track of their performance throughout the semester and seek guidance from available sources (including the instructor) if their performance drops below satisfactory levels.

## Attendance

Attending every class is highly recommended. Students are responsible for obtaining notes and/or handouts they have missed.

## Test Topics

Test 1: Chpts 1-3  
Test 2: Chpts 4, 5  
Test 3: Chpts 6-8  
Final: Chpts 1-10

Test dates will be announced at least one week in advance of each test. All tests will be ~10% cumulative.

## Make-up Policy

**No** make-up exams will be given.

## Examination Needs

• Scientific Calculator

- No. 2 pencils with eraser
- Students are not allowed to have access to cell phones during any exam.*

**Chapter Problems**

Working through problems is the **BEST** way to learn the material in this course. Work through as many end of chapter questions as you can.

**Electronic Communication**

UT Arlington has adopted MavMail as its official means to communicate with students about important deadlines and events, as well as to transact university-related business regarding financial aid, tuition, grades, graduation, etc. All students are assigned a MavMail account and are responsible for checking the inbox regularly. There is no additional charge to students for using this account, which remains active even after graduation. Information about activating and using MavMail is available at <http://www.uta.edu/oit/cs/email/mavmail.php>.

**Chemistry Assistance**

Science Education and Career Center: (Room 106 Life Science Building)  
Provides a variety of materials for assisting Chemistry students. These materials include old Chemistry 1441 exams and ThinkWell Lectures.

**Student Support Services**

UT Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. Resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals, students may visit the reception desk at University College (Ransom Hall), call the Maverick Resource Hotline at 817-272-6107, send a message to [resources@uta.edu](mailto:resources@uta.edu), or view the information at [www.uta.edu/resources](http://www.uta.edu/resources).

**Learning Objectives**

1. Students will convert between units.
2. Students will predict bonding type from the elements in a compound.
3. Students will make quantitative predictions about chemical reactions.
4. Students will use the Periodic Table of the Elements to compare properties of elements
5. Students will predict the electronic structure of elements.
6. Students will calculate properties of gases.
7. Students will critique and modify an active learning exercise.

**Strategies for Succeeding in SCIE 5355**

1. Attend *every* class.
2. Work as many end-of-chapter problems as possible. Do not look in the solutions manual until you have given your best effort to solve the problem on your own.

3. Make use of Dr. Hale's office hours.
4. Prior to class, read the chapter that will be covered in lecture.
5. Review your lecture notes after each class. Correct obvious errors and note topics which require further study or clarification.
6. Spend the necessary amount of time studying chemistry. The rule of thumb for succeeding in Chemistry is three hours of study for every hour of lecture. This means that at a minimum you should plan to study Chemistry nine hours each week.
7. Don't procrastinate. These concepts take time to sink in, and you may have to practice these exercises over a period of many days in order master the necessary skills.
8. Form a study group. This is your first avenue for getting help. Be able to communicate with each other on short notice, not just before class.

#### **Student Feedback Survey**

At the end of each term, students enrolled in classes categorized as lecture, seminar, or laboratory shall be directed to complete a Student Feedback Survey (SFS). Instructions on how to access the SFS for this course will be sent directly to each student through MavMail approximately 10 days before the end of the term. Each student's feedback enters the SFS database anonymously and is aggregated with that of other students enrolled in the course. UT Arlington's effort to solicit, gather, tabulate, and publish student feedback is required by state law; students are strongly urged to participate. For more information, visit <http://www.uta.edu/sfs>.

#### **Final Review Week**

A period of five class days prior to the first day of final examinations in the long sessions shall be designated as Final Review Week. The purpose of this week is to allow students sufficient time to prepare for final examinations. During this week, there shall be no scheduled activities such as required field trips or performances; and no instructor shall assign any themes, research problems or exercises of similar scope that have a completion date during or following this week *unless specified in the class syllabus*. During Final Review Week, an instructor shall not give any examinations constituting 10% or more of the final grade, except makeup tests and laboratory examinations. In addition, no instructor shall give any portion of the final examination during Final Review Week. During this week, classes are held as scheduled. In addition, instructors are not required to limit content to topics that have been previously covered; they may introduce new concepts as appropriate.

#### **Drop for Non-Payment of Tuition**

If you are dropped from this class for non-payment of tuition, you may secure an Enrollment Loan through the Bursar's Office. You may not continue to attend class until your Enrollment Loan has been applied to outstanding tuition fees.

#### **Drop Policy**

Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period,

students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student's responsibility to officially withdraw if they do not plan to attend after registering. Students will not be automatically dropped for non-attendance. Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. For more information, contact the Office of Financial Aid and Scholarships (<http://www.uta.edu/ses/fao>).

**Pass or Fail Grades**

If P or F is a grade option in this class and you intend to take this class for a pass/fail grade instead of a letter grade, you MUST inform the instructor, through the necessary paperwork, of your intentions BEFORE the census date.

**Americans with Disabilities Act**

The University of Texas at Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including the *Americans with Disabilities Act (ADA)*. All instructors at UT Arlington are required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of that disability. Any student requiring an accommodation for this course must provide the instructor with official documentation in the form of a letter certified by the staff in the Office for Students with Disabilities, University Hall 102. Only those students who have officially documented a need for an accommodation will have their request honored. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at [www.uta.edu/disability](http://www.uta.edu/disability) or by calling the Office for Students with Disabilities at (817) 272-3364.

**Academic Integrity**

All students enrolled in this course are expected to adhere to the UT Arlington Honor Code:

*I pledge, on my honor, to uphold UT Arlington's tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence.*

*I promise that I will submit only work that I personally create or contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.*

Instructors may employ the Honor Code as they see fit in their courses, including (but not limited to) having students acknowledge the honor code as part of an examination or requiring students to incorporate the honor code into any work submitted. Per UT System *Regents' Rule* 50101, §2.2, suspected violations of university's standards for academic integrity (including the Honor Code) will be referred to the Office of Student Conduct. Violators will be disciplined in accordance with University policy, which may result in the student's suspension or expulsion from the University.

**Copyright Statement**

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all lectures. Students are prohibited from selling (or being paid for taking) notes during this course to or by any person or commercial firm without the express written permission of the instructors teaching this course.