

CHEMISTRY 301 (TIP) – FALL 2012
DR. FAKHREDDINE

UNIQUE NUMBERS

51360, 51363, 51370

CLASS MEETING

MWF 11:00 - 12:00, WEL 2.312

DISCUSSION SECTIONS

51360: TH 12:30 – 1:30; (WEL 4.132)

51363: W 12:00 – 1:00; (WEL 3.422)

51370: W 3:00 – 4:00; (WEL4.308)

ALL DISCUSSIONS START THE WEEK OF SEPTEMBER 3rd.

LECTURER

Dr. Fatima Fakhreddine

E-MAIL: fatima.fakhreddine@mail.utexas.edu

OFFICE: WEL 4.312

PHONE: 232-6113.

OFFICE HOURS (can see students by appointment at other times): M 2:50 – 3:50, TH 3:00 – 4:00 and F 9:30 – 10:30.

TEACHING ASSISTANTS

Kristen Suhr

E-MAIL: kristin.suhr@cm.utexas.edu

OFFICE HOURS (can see students by appointment at other times):

M 1:00 – 2:00 and TH 11:00 – 12:00 (Suite A, 2nd floor hallway in WEL)

Katie Peth

E-MAIL: kapeth@utexas.edu

OFFICE HOURS (can see students by appointment at other times):

T 10:00 -11:00 and W 4:00 – 5:00 Location TBA

IMPORTANT NOTES:

- 1- ALL OFFICE HOURS START THE WEEK OF SEPTEMBER 3rd.
- 2- A DIFFERENT OFFICE HOUR SCHEDULE WILL BE IN PLACE DURING EXAM WEEKS. EACH EXAM WEEK OFFICE HOUR SCHEDULE WILL BE ANNOUNCED IN CLASS AND POSTED ON BLACKBOARD ON THE FRIDAY BEFORE EACH EXAM.
- 3- THERE ARE NO DISCUSSION SESSIONS DURING EXAM WEEKS.

EMAIL ETIQUETTE

- 1- When using email to contact us, please write CH 301 on the subject line, address the email properly, and make sure you sign your email with your first and last name.
- 2- Please do not use email to ask for help on HW questions or concepts. You will need to visit us during office hours or review sessions for such questions. If you miss a class and need to know the next reading assignment, please check blackboard before emailing us. If you do not find the needed information posted, please email your TA and not Dr. Fakhreddine.

WEB PAGE

We will be using blackboard. Please log in at <https://courses.utexas.edu>.

When You Are In Class.... Turn off your cell phones and put them away. Put away all other sources of distractions such as cell phones, PCs, iPads, iPods, The Daily Texan etc...

NOTICES

Will be announced in class and posted on blackboard.

REVIEW SESSIONS

During an exam week, **there will be no regular discussions**. Instead, the TA will conduct ONE evening review session for ALL students. Times and locations are listed below.

ADD/DROP

The last date to add or drop a course is Friday, September 14, 2012.

COURSE PREREQUISITES

Credit with a grade of at least C- or co-enrollment for one of the following: SC 302, M 305G, M 408C, M 408D, M 408K, M408L, M 408M, M 408 N; and an appropriate score on the ALEKS chemistry placement examination.

QUANTITATIVE REASONING FLAG

This course carries the Quantitative Reasoning flag. Quantitative Reasoning courses are designed to equip you with skills that are necessary for understanding the types of quantitative arguments you will regularly encounter in your adult and professional life. You should therefore expect a substantial portion of your grade to come from your use of quantitative skills.

TEXTBOOK

Please feel free to purchase any old edition general chemistry or chemical principles textbook and save a lot of money! Of course, an e-book is also an option, if you prefer, but it is not cheap. This will be discussed further in class.

QUEST (required)

This course makes use of the web-based Quest content delivery and homework server system maintained by the College of Natural Sciences. This homework service will require a \$25 charge per student for its use, which goes toward the maintenance and operation of the resource. Please go to <http://quest.cns.utexas.edu> to log in to the Quest system for this class. After the 12th day of class, when you log into Quest you will be asked to pay via credit card on a secure payment site. You have the option to wait up to 30 days to pay while still continuing to use Quest for your assignments. If you are taking more than one course using Quest, you will not be charged more than \$50/semester. For payment questions, email quest.fees@cns.utexas.edu.

READING ASSIGNMENTS

For reading assignments, we will be referring to topics that will be easy to find in any textbook. A daily tentative lectures schedule is posted at the end of the syllabus.

HOMEWORK (OPTIONAL, for bonus points)

There will be approximately 10 homework assignments for you to complete for the session. Homework assignments will absolutely not be accepted after the deadline that is posted on the homework assignment. Homework must be turned in (submitted) via the web before the deadline in order to receive any credit. We will add 10% of the **raw** score earned on the homework assignments turned in before an exam to this exam **raw** score. A late homework will not be graded and a score of zero will be recorded.

HOW DO YOU GET YOUR HOMEWORK ASSIGNMENT?

We will be using the College of Natural Sciences server, QUEST (details above). The URL is the following: <http://quest.cns.utexas.edu/student/>.

More info on quest is posted on blackboard under course documents.

ICLICKER

We will be using the iclicker for in class pop/attendance quizzes. Either version of the iclicker will work for the course. In order to get credit for your pop quizzes, your iclicker has to be registered.

HOW DO YOU REGISTER YOUR ICLICKER?

BLACKBOARD REGISTRATION WILL NOT WORK FOR THIS COURSE!

All iclickers need to be registered by Wednesday, September 5th. **Please go to the following site and follow the instructions:** <http://www.iclicker.com/registration/>

GRADING FOR THE COURSE

The grades for the course will be determined as follows:

Quizzes/Attendance		100 points possible
Hour exam total	Best 3 of 4 exams, 200 points each	600 points possible
Final exam	300 points	<u>300 points possible</u>
		1000 points total

The total scores will be considered to assign letter grades for the course using the following scale:

920 – 1000 A, 900 – 919 A⁻, 880 – 899 B⁺, 820 – 879 B, 800 – 819 B⁻, 780 – 799 C⁺, 720 – 779 C, 700 – 719 C⁻, 600 – 699 D, 599 and less F.

THERE WILL BE NO CURVE OR ADJUSTMENT ON EXAMS. HOWEVER, an outstanding final will affect grades that are close to the announced cutoffs.

DETAILS OF THE GRADING

- 1. Quizzes:** Quizzes will be given any time during lecture period on Mondays (unless otherwise announced in class). The material covered on each quiz will be derived from the reading assignments and the lecture material since the “last quiz”. At the end of the semester, you will be allowed to drop the lowest two quiz scores and your quiz total will be adjusted to reflect a possible total of 100 points. Because you will be allowed to drop the two lowest quiz scores, **there will be no make-up for missing quizzes. No early quizzes will be given, either. Quizzes will be given at the scheduled times only. If you miss a quiz, for any reason, a score of zero will be assigned for that quiz.**
- 2. Attendance:** You are required to attend the lectures and your weekly discussion sessions. A missed discussion session will result in a “zero” score for that week’s quiz. With legitimate excuse, you will be allowed to miss two discussion sessions throughout the semester with no penalty. You are expected to be on time for the discussions. A student who is more than five minutes late will count as tardy. Two tardies will count as an absence. A student who comes more than 10 minutes late will count as absent. Attendance/pop quizzes may be given during lecture at any time. Any points you earn on such quizzes will be considered bonus points to be added to your total points at the end of the semester.
- 3. Hour Exams:** There will be four evening exams. Each of the exams will cover one portion of the course to be announced in class. Each exam will last one hour and a half and will be machine graded on a scale of 200 points. If you are not exempt from the final, the best three exam scores will be used in calculating your grade. **Because one exam will be dropped, no makeup exams will be given except for a documented and really compelling reason. A reason to take the exam at a different time is deemed compelling at the discretion of the instructor of the course. A score of zero will be recorded for any exam that is missed for any reason.** The exam dates are online on the course schedule and listed in this syllabus as well. Therefore, you should be able to plan ahead for possible conflicts. In the case of a possible conflict, please email both the instructor of the course and the TA at least two weeks ahead of the exam time.

4. ***Final Exam Exemption:*** If you average 190/200 or above on the **four** in-class exams and if your quiz average is 80% or above, you will be exempt from the final and you will be awarded an A for the course.
5. ***Final Exam:*** The final exam will be comprehensive, covering the entire material of the course, and will be machine graded on a scale of 300 points.
6. ***For students in CH 108 (51645):*** Everything in this syllabus applies to you just like any other CH 301 student. However, CH 108 is a pass/fail class. Passing CH 108 will depend on attendance. CH 108 meets on M (4:00 – 5:00) in WEL 3.502.

EXAM DATES

Exam 1: Thursday September 20th 7:00– 8:30 PM (JES A121A)

Exam 2: Thursday October 11th 7:00 – 8:30 PM (JES A121A)

Exam 3: Thursday November 8th 7:00 – 8:30 PM (JES A121A)

Exam 4: Thursday December 6th 7:00 – 8:30 PM (JES A121A)

FINAL: Wednesday, December 12th, 2:00 – 5:00 PM

SCHEDULE FOR EXAM REVIEW SESSIONS

Exam 1 review session: Tuesday September 18th, 5:00 – 7:00 (WEL 3.502)

Exam 2 review session: Tuesday October 9th, 5:00 – 7:00 (WEL 3.502)

Exam 3 review session: Tuesday November 6th, 5:00 – 7:00 (WEL 3.502)

Exam 4 review session: Tuesday December 4th, 5:00 – 7:00 (WEL 3.502)

POLICIES REGARDING QUIZZES, EXAMS, AND GRADING

- 1- For all quizzes and exams, **you are required to bring your university ID card**. No other identification will be accepted. If you do not have this ID card when you take an exam or a quiz, you will still be permitted to take the exam or the quiz, but you will be asked to sign an identification sheet. You must then contact the TA to show a valid UT ID card within **two** days after the quiz or the exam. If you do not do so within this time limit, you will get a score of zero for that quiz or exam.
- 2- You must bring (at least) one sharpened number 2 pencil to each exam.
- 3- The use of **programmable calculators** is **not permitted** during quizzes or exams.
- 4- As stipulated in the University guidelines regarding exams, you may not leave the exam room for any reason during an exam and then re-enter the room to resume the exam.
- 5- If you arrive late for an exam but before 7:45 PM, you may still take the exam. If you arrive after 7:45 PM, you will not be permitted to take that exam; your score for the exam will be ZERO. No one will be permitted to leave the exam room before 7:45.

- 6- On a quiz day, a student who is late to class will not be allowed to take the weekly quiz and will earn a score of zero on that quiz.
- 7- All exams and all homework assignments will be machine-graded. Questions are multiple choice or numerical answer questions. Quizzes will be hand-graded or machine graded. Hand-graded quizzes will be handed back by the TAs once we announce in class that the quizzes are ready for you to pick up.
- 8- All solutions to web-based homework assignments, machine-graded quizzes and exams can be downloaded on line from the HW server after the assignment is due. Solutions to hand-graded quizzes and worksheets will be posted on blackboard.
- 9- **You are required to keep your copy of all exams and quizzes until the final letter grades are assigned in the course. You will be asked to submit them to solve any grading related problems.**
- 10- If you suspect an error in grading your exam or quizzes, please see your TA within two class days after the assignment has been graded.
- 11- Scholastic dishonesty will be prosecuted to the full extent. It is the students' responsibility to find out what is considered as scholastic dishonesty. This information is available in the current issue of the General Information Catalog published by the Registrar's Office.

STUDENTS WITH DISABILITIES

The University of Texas at Austin provides upon request appropriate academic accommodations for qualified students with disabilities. For more information, contact the Office of the Dean of Students at: 471-6259, 471-4641.

SUGGESTIONS TO HELP YOU DO WELL IN THIS COURSE

- 1- MAKE SURE YOU REVIEW YOUR BASIC CONCEPTS!!
- 2- READ BEFORE COMING TO CLASS.
- 3- TAKE CLASS NOTES.
- 4- REWRITE YOUR NOTES USING THE TEXT.
- 5- DO ALL ASSIGNMENS.
- 6- DO NOT FALL BEHIND.
- 7- DO NOT BE INTIMIDATED TO SEEK HELP.
- 8- LEARN FROM YOUR MISTAKES.

TENTATIVE LECTURES SCHEDULE

Wednesday 8/29	Introduction/Syllabus
Friday 8/31	Electromagnetic Radiation-Matter
Monday 9/2	HOLIDAY
Wednesday 9/4	Electromagnetic Radiation-Matter continued
Friday 9/6	Atomic spectrum of Hydrogen – The Bohr Model
Monday 9/10	QUIZ 1 – The Quantum Mechanical Description – Particle in the Box
Wednesday 9/12	The Wave Equation for the Hydrogen Atom – Physical Meaning of a Wave Function
Friday 9/14	Quantum Numbers – Orbitals
Monday 9/17	QUIZ 2 – Periodic Table – Electronic Configuration
Wednesday 9/19	Electron Configuration continued – Further Development of Polyelectronic Model
Thursday 9/20	EXAM 1
Friday 9/21	Periodic Table Trends – Properties of a Group
Monday 9/24	Types of Chemical Bonds – Ions
Wednesday 9/26	Ions - Binary Ionic Compounds
Friday 9/28	Localized Electron Bonding Model – Lewis Structure
Monday 10/1	QUIZ 3 – Resonance – Exception to the Octet
Wednesday 10/3	VSEPR – VS – Polarity
Friday 10/5	VSEPR – VS – Polarity
Monday 10/8	QUIZ 4 – Single Bonds, Double Bonds and Triple Bonds – Molecules with more than One Central Atom
Wednesday 10/10	Review
Thursday 10/11	EXAM 2
Friday 10/12	Molecular Orbital Model
Monday 10/15	Bonding in Homonuclear Diatomic Molecule
Wednesday 10/17	Bonding in Heteronuclear Diatomic Molecule
Friday 10/19	Ideal Gas Laws
Monday 10/22	QUIZ 5 – Ideal Gas Equation – Molecular Formulas of Gases

Wednesday 10/24	Gas Stoichiometry – Dalton Laws of Partial Pressure – Vapor Pressure
Friday 10/26	Kinetic Molecular Theory – Diffusion and Effusion of Gases
Monday 10/29	QUIZ 6 – Collisions of Gas Particles
Wednesday 10/31	Real Gases – Deviation from Ideality – Introduction to IMF
Friday 11/2	IMF continued – Introduction to Liquids and Solids
Monday 11/5	QUIZ 7 – Electrolytes
Wednesday 11/7	Net Ionic Equation
Thursday 11/8	EXAM 3
Friday 11/9	Stoichiometry in Solutions
Monday 11/12	Energy
Wednesday 11/14	Enthalpy
Friday 11/16	Calorimetry
Monday 11/19	QUIZ 8 – Hess's Law – Enthalpy of Formation
Wednesday 11/21	HOLIDAY
Friday 11/23	HOLIDAY
Monday 11/26	QUIZ 9 – Bond Energy
Wednesday 11/28	Entropy
Friday 11/30	Entropy continued
Monday 12/3	QUIZ 10 – Free Energy – Free Energy and Chemical Reactions
Wednesday 12/5	Temperature Dependence of Spontaneity – Equilibrium
Thursday 12/6	EXAM 4