CHEM 1410D: General Chemistry for Science Majors 3 hrs

Department of | Life & Health Sciences | Division of | Liberal Arts & Life Sciences

Instructor Name: Donna L. Chevalier
Office Location: 305, Founder’s Hall
Office Phone: 972-338-1501 Dept (messages only)
Email Address: donna.chevalier@unt.edu

Office Hours: 2:00 - 3:00 pm Sat; 1:00 - 2:00 pm Mon; 2:00 - 3:00 pm Wed
(If you need another time, please email or see me before /after class to make arrangements)
Virtual Office Hours: N/A

Classroom Location: DAL2 213
Class Meeting Days & Times:
Lecture M/ W 11:30 am - 12:50 pm
Recitation W 1:00 pm - 1:50 pm

Course Catalog Description: Fundamental concepts, states of matter, periodic table, structure and bonding, stoichiometry, oxidation and reduction, solutions, and compounds of representative elements.

Prerequisites: MATH 1100D or equivalent.
Co-requisites: General Chemistry Lab, CHEM1430D, should be taken concurrently.

Required Text:
TITLE: Principles of Chemistry: The Molecular Science
AUTHORS: Moore, Stanitski and Jurs
COPYRIGHT YEAR: 2010
PUBLISHER: Brooks/Cole, Cengage Learning
ISBN: 9780495390794

Required Online Homework: Sapling Learning
Access to Learning Resources:
UNT Dallas Library:
phone: (972) 780-3625;
web: http://www.unt.edu/unt-dallas/library.htm
UNT Dallas Bookstore:
phone: (972) 780-3652;
e-mail: 1012mgr@fheg.follett.com

Course Goals or Overview:
The two primary goals of this course are:
1) to help the student gain a strong understanding of the basic concepts of chemistry and
2) to help them learn how to solve problems related to those concepts.

For each topic covered, it is critical to understand the concepts being discussed. Secondly, it is essential that the student learns how to approach problem solving related to those concepts. This will involve learning and applying stepwise, analytical processes to answering questions and working problems.

Upon successful completion of this course, the student should be able to:
(1) demonstrate an understanding of the underlying concepts associated with the early and modern atomic theories and their applications to the periodic table
(2) be familiar with basic chemical reactions along with how elements combine to form different structures,
(3) be able to name elements and compounds
(4) understand the connections between a balanced chemical equation and mass/molar quantities, and the importance of chemistry as the central science
(5) solve problems related to the concepts of density, heat, stoichiometric relationships, gas laws, and solubility.
Core Learning Objectives/Outcomes:
1. Explore the natural sciences.
2. Be able to locate, evaluate and organize information including the use of information technologies.
3. Be able to think critically and creatively, and learn to apply different systems of analysis.
4. Develop problem solving skills that incorporate multiple viewpoints and differing contexts in their analysis.
6. Engage with a variety of others in thoughtful and well-crafted communication.
7. Broaden and refine their thinking as a part of the give and take of ideas, seeking to better understand other's perspectives as well as their own.

Learning Objective/Outcome Assessments:
These learning objectives/outcomes noted on pg 1 will be assessed through specific assignments given during the semester. These include:

- A special topics essay on a current issue related to chemistry
- A presentation based on the essay above; Student audience participation will also be required as they will be expected to ask questions of the presenter and evaluate the presentation along with the course instructor.
- Exam questions on reaction stoichiometry & percent yield and gas law problems.

Course Outline
This schedule is subject to change by the instructor. Any changes to this schedule will be communicated by the instructor during regularly scheduled class period or via Blackboard. If you are absent, it is your responsibility to contact the instructor or classmates to determine any changes.

TENTATIVE LECTURE SCHEDULE  
(SUBJECT TO CHANGE BY THIS INSTRUCTOR)

<table>
<thead>
<tr>
<th>TOPICS</th>
<th>TIMELINE / DATES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter 1. The Nature of Chemistry</td>
<td>1/14 , 1/16</td>
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<tr>
<td>Chapter 2. Atoms and Elements</td>
<td>1/16 , 1/23</td>
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<tr>
<td>Chapter 3. Chemical Compounds / Review for Midterm 1</td>
<td>1/28 , 1/30, 2/4</td>
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<tr>
<td><strong>Midterm 1 - Chapters 1-3</strong></td>
<td>Wednesday, 2/6</td>
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<tr>
<td>Chapter 4. Quantities of reactants and products, stoichiometry</td>
<td>2/11, 2/13</td>
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<tr>
<td>Chapter 5. Chemical reactions and concentration of solutions</td>
<td>2/18, 2/20</td>
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<tr>
<td><strong>Midterm 2 - Chapters 4-6</strong></td>
<td>Wednesday, 3/6</td>
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<tr>
<td>Chapter 8. Covalent bonding and Lewis structures</td>
<td>3/25 , 3/27</td>
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<tr>
<td>Chapter 9. Molecular structures</td>
<td>4/1 , 4/3</td>
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<tr>
<td><strong>Special Topics Essay due</strong></td>
<td>4/3</td>
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<tr>
<td><strong>Midterm 3 - Chapters 7-10</strong></td>
<td>Wednesday, 4/17</td>
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<td></td>
<td>Last day to drop course 4/19</td>
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<td></td>
<td>Presentations /Review for Final Exam 4/22, 4/24, 4/29, 5/1</td>
</tr>
<tr>
<td><strong>Comprehensive Final Exam - Chapters 1 - 10</strong></td>
<td><strong>Monday, May 6th, 2013 @ 11:00 am - 1:00 pm</strong></td>
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Course Evaluation Methods

This course will utilize the following instruments to determine student grades and proficiency of the learning outcomes for the course.

Recitation Quizzes - A short quiz will be given at the beginning of recitation class over current lecture topics. There will be 10 - 13 quizzes. The lowest quiz will be dropped.

Online Homework – Sapling Learning assignments. Due dates will be provided on the Sapling website. The instructor will strive to provide reminders in class, but it is the student’s responsibility to check the Sapling site regularly. There will be 10 - 13 homework assignments. The lowest homework will be dropped.

Special Topics Essay – a term paper designed to give students the opportunity to independently research a specific issue in chemistry topics exploring any relevant ethical dilemmas and potential benefits or harm to society or individuals. Students will be evaluated on spelling and grammar, organization of information, quality of references (including proper use of citations), and depth and quality of content. A grading rubric will be provided on Blackboard. **Due Date April 3, 2013**.

Presentation – a 5-10 minute in-class presentation based on the special topics essay. Grading will be based on content, delivery, ability to answer questions, and participation during other presentations. A grading rubric will be provided on Blackboard. **Presentations will take place during April and dates will be either assigned or arranged by a sign-up sheet.**

Exams – tests are designed to measure knowledge of presented course material. While midterm exams will focus on material discussed since the previous exam, the final exam will be comprehensive. The final exam is mandatory. All exams will consist of both multiple choice questions + short-answer questions &/or problems.

Grading Matrix for Course:

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Comments</th>
<th>Value (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recitation Quizzes</td>
<td>10-13 (lowest will be dropped)</td>
<td>5 %</td>
</tr>
<tr>
<td>Online Homework</td>
<td>10-13 (lowest will be dropped)</td>
<td>15 %</td>
</tr>
<tr>
<td>Special Topics Essay</td>
<td>Grading rubric posted on Blackboard</td>
<td>5 %</td>
</tr>
<tr>
<td>Presentation</td>
<td>Grading rubric posted on Blackboard</td>
<td>5 %</td>
</tr>
<tr>
<td>Midterm Exams</td>
<td>3 exams at 15% each</td>
<td>45 %</td>
</tr>
<tr>
<td>Comprehensive Final Exam</td>
<td>1 final exam at 25%</td>
<td>25%</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>100 %</strong></td>
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Grade Determination:
- A = 89.5 or better
- B = 79.5 - 89.4 %
- C = 69.5 - 79.4 %
- D = 59.5 - 69.4 %
- F = 59.4 or less %

General Chemistry I Labs – You should enroll in both General Chemistry lecture (CHEM1410D) and General Chemistry Labs (CHEM1430D). It is strongly suggested that you enroll in them concurrently. However, CHEM1410D and CHEM1430D are separate courses. Students receive separate grades for the lecture and lab courses. Dropping either course does NOT automatically drop you from the other course if you enrolled in both.

University Policies and Procedures

Students with Disabilities (ADA Compliance):
The University of North Texas Dallas faculty is committed to complying with the Americans with Disabilities Act (ADA). Students’ with documented disabilities are responsible for informing faculty of their needs for reasonable accommodations and providing written authorized documentation. Grades assigned before an accommodation is provided will not be changed as accommodations are not retroactive. For more information, you may visit the Student Life Office, Suite 200, Building 2 or call the student life office at 972-780-3632. You may also contact: Patricia Quiñones, Career Development Coordinator, 972.338.1781 , 972.338.1789 (fax) patricia.quinones@unt.edu
Student Evaluation of Teaching Effectiveness Policy:
The Student Evaluation of Teaching Effectiveness (SETE) is a requirement for all organized classes at UNT. This short survey will be made available to you at the end of the semester, providing you a chance to comment on how this class is taught. I am very interested in the feedback I get from students, as I work to continually improve my teaching. I consider the SETE to be an important part of your participation in this class.

Attendance and Participation Policy:
The University attendance policy is in effect for this course. Class attendance and participation is expected because the class is designed as a shared learning experience and because essential information not in the textbook will be discussed in class. The dynamic and intensive nature of this course makes it impossible for students to make-up or to receive credit for missed classes. Attendance and participation in all class meetings is essential to the integration of course material and your ability to demonstrate proficiency. Students are responsible to notify the instructor if they are missing class and for what reason. Students are also responsible to make up any work covered in class. It is recommended that each student coordinate with a student colleague to obtain a copy of the class notes, if they are absent.

Attendance will be taken at the beginning of each class, both lecture and recitation. You will NOT be graded on attendance/participation.

Assignment Policy:

*****Online Homework (mandatory):
Assignments based on the text will be posted on the Sapling Learning site: https://www.saplinglearning.com, which is an online homework service. Due dates will be provided on the Sapling website during the semester, and it is your responsibility to check the website and complete your homework on a regular basis.

There will be at least one homework assignment for each of the chapters covered in the class. To use Sapling Learning each student must independently set up an account by going to https://www.saplinglearning.com. Each student is entitled to one (1) Sapling Learning account for this class; extra accounts will be deleted.

There is a $31.97 fee for registration, which is to be paid online with a credit card. Instructions for setting up your Sapling Learning account and class registration are given below. Please note, failure to complete a homework assignment by the due date because of technical difficulties will not serve as a valid excuse.

The course title/cost:
University of North Texas - CHEM 1410D - Spring13 - CHEVALIER
Instructor: Donna Chevalier
Cost: $31.97

Sign-up instructions for Sapling Learning:
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Students:
1. Go to http://saplinglearning.com
2a. If you already have a Sapling Learning account, log in then skip to step 3.
2b. If you have Facebook account, you can use it to quickly create a SaplingLearning account. Click the blue button with the Facebook symbol on it (just to the left of the username field). The form will auto-fill with information from your Facebook account (you may need to log into Facebook in the popup window first). Choose a password and timezone, accept the site policy agreement, and click “Create my new account”. You can then skip to step 3.
2c. Otherwise, click “create account”. Supply the requested information and click “Create my new account”. Check your email (and spam filter) for a message from Sapling Learning and click on the link provided in that email.
3. Find your course in the list (you may need to expand the subject and term categories) and click the link.
4. Select a payment option and follow the remaining instructions.

Once you have registered and enrolled, you can log in at any time to complete or review your homework assignments. During sign up - and throughout the term - if you have any technical problems or grading issues, send an email to support@saplinglearning.com explaining the issue. The Sapling support team is almost always more able (and faster) to resolve issues than your instructor.
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*****Essays
Essays must be word-processed with all references clearly provided using APA style. Essays will be posted and turned in as an attachment via Blackboard (see Assignments tab). A rubric for grading will also be posted on Blackboard, with grading based on spelling and grammar, organization of information, quality of references, and depth and quality of content.

*****PowerPoint Presentations
Presentations based on your essay will take place during the last couple of weeks of classes. A sign-up sheet will determine the date of each student’s presentation.
Regarding Late work and Exams/make-up exams:

No late assignments will be accepted without obtaining prior authorization or proving validity of absence.

Exams should be taken as scheduled and will only be administered on the dates provided in the syllabus. No makeup examinations will be allowed except for documented emergencies OR if you will be observing a religious holy day that is coincidental with an exam (if so, you must make your instructor aware before its observance). Make-up exams for religious holy day observance will be administered directly following the class period preceding the regular exam date. Any other allowed make-up exams will be given at the instructor’s convenience. (See Student Handbook)

Academic Integrity:

Academic integrity is a hallmark of higher education. You are expected to abide by the University’s code of Academic Integrity policy. Any person suspected of academic dishonesty (i.e., cheating or plagiarism) will be handled in accordance with the University’s policies and procedures. Refer to the Student Code of Academic Integrity at [http://www.unt.edu/unt-dallas/policies/Chapter%2020Education%20and%20Funding%20Code%20of%20Academic_ Integrity.pdf](http://www.unt.edu/unt-dallas/policies/Chapter%2020Education%20and%20Funding%20Code%20of%20Academic_ Integrity.pdf) for complete provisions of this code.

In addition, all academic work submitted for this class, including exams, papers, and written assignments should include the following statement:

On my honor, I have not given, nor received, nor witnessed any unauthorized assistance that violates the UNTD Academic Integrity Policy.

Bad Weather Policy:

On those days that present severe weather and driving conditions, a decision may be made to close the campus. In case of inclement weather, call UNT Dallas Campuses main voicemail number (972) 780-3600 or search postings on the campus website www.unt.edu/dallas. Students are encouraged to update their Eagle Alert contact information, so they will receive this information automatically.

Diversity/Tolerance Policy:

Students are encouraged to contribute their perspectives and insights to class discussions. However, offensive & inappropriate language (swearing) and remarks offensive to others of particular nationalities, ethnic groups, sexual preferences, religious groups, genders, or other ascribed statuses will not be tolerated. Disruptions which violate the Code of Student Conduct will be referred to the Office of Student Life as the instructor deems appropriate.

Other Course Policies:

Cell phone policy

Do not use your cell phone in class; this includes calling, texting, internet surfing, and gaming. If your cell phone must be on during class, apply its “silent” settings. If you keep your phone on during class time, do not keep it on top of the table you are sitting at, please keep it in your pocket, purse, or bag. If your phone rings during an exam, even if the silent setting has been applied, you must turn in your exam immediately. A cell phone may NOT be used in lieu of a calculator.

Laptop policy

You may use your laptop in class to take notes, but only to take notes. If it becomes apparent that laptops are being used by the class for activities other than lecture note taking, all laptop use will be prohibited during class time. Laptops are not to be used during exams. If you bring a laptop to an exam, it must remain in a bag and under the table. A Laptop may not be used in lieu of a calculator.

Cheating and plagiarism

Cheating will not be tolerated in this course. If you are found cheating on an assignment or exam, you will not receive credit for the assignment/exam, and student services will be notified. Cheating includes using unauthorized material or devices on an exam, the work of another individual without proper citations, using larger portions of another’s work, even with proper citations, and copying the work of a classmate. There are no exceptions to this policy.

BLACKBOARD:

BLACKBOARD will be used extensively. Each lecture's presentation (in a PowerPoint Slideshow) will be posted on BLACKBOARD. Other important files will also be uploaded to BLACKBOARD for your use, such as review sheets and practice tests. All grades will be maintained in Blackboard.
Lecture Courtesy:
Please be on time and remain in class for the entire time period in which the class is scheduled. Lecture is not a “come and go as you please, anytime you please” class!!! If you come into the classroom, I expect you to stay for the entire class period. If you must leave before the class ends, please do so quietly and I prefer that you do not return to class. Disruptions really bother not only me as I lecture, but to the other students who are trying to focus on the material being discussed and who are actively listening! Any disruptive behavior that interrupts the educational process will not be tolerated. You will be asked to leave and may not return until you have met with me to discuss your behavior.

You will be expected to turn off all cell phones, pagers, IPODS, etc for the duration of the lecture period. Most of you have come to learn. Please respect others by keeping talking to a minimum and phones on silent or vibrate. If you get a call (hey you may have a sick kid etc.) excuse yourself and take the call outside, quietly !!! Better yet, text them, quietly, and tell them you are in class and will get right back to the once class is over !!

Keep food and drink to a minimum. I don’t mind water/soda and a candy bar/ bag of chips in lecture, but please do not bring in a McDonald’s / Whataburger/ etc meal !! It is unprofessional behavior to bring an entire meal into the lecture classroom to eat while we have class. Eat your meal outside the classroom, then come into lecture.

Communication
I will use Blackboard to post any answer keys and supplemental information. I may also email the class occasionally, so please check your university email regularly. If you prefer emails be sent to a non-university account, please provide that to me as soon as you can.

I check my emails frequently, and will normally respond within 24 - 48 hours.

Grade of “Incomplete”
If a student is unable to complete the course due to extenuating circumstances, a grade an incomplete grade “I” may be assigned: The student must have attended class regularly up to April 19th, 2013 with a passing grade and arrangements must be made with me before the end of the semester. Also note the University will automatically change a grade of “I” to an “F” at the end of the next term, so the missed work must be made up before that time.

Important Dates:

****To Withdraw from the Semester (Drop All Courses)****  -  Friday, April 19, 2013

Effective Fall 2012, students wanting to withdraw from the semester (drop ALL courses for the semester) must do so at the Dean of Student's Office.

Dean of Student's Office Withdrawal Information

<table>
<thead>
<tr>
<th>Date(s)</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registration</td>
<td>Registration for the semester is noted on the student's transcript, but individual courses are not listed.</td>
</tr>
<tr>
<td>January 28, 2013</td>
<td>An automatic grade of W is assigned.</td>
</tr>
<tr>
<td>January 29 - February 22, 2013</td>
<td>A grade of W or WF is assigned for all courses as appropriate. Refer to the Graduate or Undergraduate catalog for more information.</td>
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</tbody>
</table>