

**McLennan**  
C O M M U N I T Y  
**COLLEGE**

WACO, TEXAS

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**COURSE SYLLABUS  
AND  
INSTRUCTOR PLAN**

**INTRODUCTORY CHEMISTRY I  
CHEM 1405.50**

**Raymond Kessler**

**Note: This is a 16-week course**

# INTRODUCTORY CHEMISTRY I

CHEM 1405.01

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## **Course Description:**

Survey course introducing chemistry. Topics may include inorganic, organic, biochemistry, food/physiological chemistry, and environmental/consumer chemistry. Designed for allied health students, and for students who are not science majors. Introduces basic laws, theories, concepts, use of the metric system, atomic structure and matter, nuclear chemistry, periodic table, chemical bonding, solution chemistry, behavior of gases, and environmental chemistry. Semester Hours 4 (3 lec/3 lab)

## **Prerequisites and/or Corequisites:**

No Prerequisite required or Corequisite required

## **Course Notes and Instructor Recommendations:**

It is recommended that the student attend class regularly, take adequate lecture notes, and study outside of class. Problems sets will require the student be knowledgeable of algebraic manipulation of symbolic equations. Assignments will be given for reading material in preparation for lecture and for homework assignments. It is vital that you read the text BEFORE the lecture on that chapter. This will greatly improve your understanding of the topic. If there is difficulties learning the material consult with the instructor, or seek assistance from the free tutoring available on campus. The syllabus, lectures, homework, reviews, and any other information will be posted on Brightspace.

## **Instructor Information:**

Instructor Name: Raymond Kessler

MCC E-mail: rkessler@mclennan.edu

Office Phone Number:

Office Location: SB 309

Office/Teacher Conference Hours: available upon request

Other Instruction Information:

## **Required Text & Materials:**

Title: Basic Chemistry

Author: Timberlake & Timberlake

Edition: 5<sup>th</sup> Ed.

Publisher: Pearson

ISBN: 9780134465517

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Laboratory Manual: Chemistry 1405 Lab Manuel

Author: Robert D. Ford

MCC Publication

You are required to have your own 'indirectly vented safety goggles' (available in the MCC Bookstore and from other sources).

Other material needed included: nonprogrammable scientific calculator, chemistry goggles available at MCC bookstore.

**MCC Bookstore Website:** <http://www.mclennan.edu/bookstore/>

## **Student Support/Resources:**

MCC provides a variety of services to support student success in the classroom and in your academic pursuits to include counseling, tutors, technology help desk, advising, financial aid, etc. A listing of these and the many other services available to our students is available at <http://www.mclennan.edu/campus-resource-guide/>

College personnel recognize that food, housing, and transportation are essential for student success. If you are having trouble securing these resources, we encourage you to contact a success coach by calling (254) 299-8226. Students can visit the Completion Center Monday-Friday from 8:00 a.m.-5:00 p.m. to meet with a success coach and receive additional resources and support to help reach academic and personal goals. Paulanne's Pantry (MCC's food pantry) is open 12:00 p.m.-1:00 p.m., Monday-Friday, without an appointment. The Completion Center and pantry are located on the Second Floor of the Student Services Center (SSC).

## **Minimum Technical Skills:**

Students should have basic computer skills, knowledge of word processing software, and a basic understanding of how to use search engines and common web browsers.

## **Backup Plan for Technology:**

In the event MCC's technology systems are down, you will be contacted/notified through your MCC student email address. Please note that all assignments and activities will be due on the date specified in the Instructor Plan, unless otherwise noted by the instructor.

\* [Click Here for the Minimum System Requirements to Utilize MCC's D2L|Brightspace](http://www.mclennan.edu/center-for-teaching-and-learning/teaching-commons/requirements) ([www.mclennan.edu/center-for-teaching-and-learning/teaching-commons/requirements](http://www.mclennan.edu/center-for-teaching-and-learning/teaching-commons/requirements))  
Click on the link above for information on the minimum system requirements needed to reliably access your courses in MCC's D2L|Brightspace learning management system.

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## **Methods of Teaching and Learning:**

Lecture sessions followed by major examinations, outside assignment/checkups, lab exercises with report sheets/checkups and occasional bonus point opportunities. Lecture will be a combination of PowerPoint presentations, problem sets, and discussion.

Lab sessions offer hands on experience in a laboratory environment. It is the responsibility of the student to read the lab before the lab session begins to maintain a safe working environment. Students may be required to work independently or as a group.

## **Course Objectives and/or Competencies:**

- A. To acquaint the student with the general principles of chemistry and the applications of chemistry to modern living.
- B. To help the student appreciate the development of this science and the importance of chemistry in society.
- C. To gain some understanding of chemical phenomena in the student's environment.
- D. To develop an adequate scientific vocabulary.
- E. To acquaint the student with the use of basic chemical manipulations, formulas, equations and problems – both theoretically and practically.
- F. To acquaint the student with the use of some of the more common apparatus and methodology found and used in the routine chemistry laboratory and to demonstrate to the student that chemistry is a laboratory science.
- G. To aid the student in developing a well-rounded personality with a philosophy of good ideals.

## **Course Outline or Schedule:**

Week	Day	Topic
1	13-Jan	Mon
	15-Jan	Wed
2	20-Jan	Mon
	22-Jan	Wed
3	27-Jan	Mon
	29-Jan	Wed
4	3-Feb	Mon
	5-Feb	Wed
Orientation/syllabus. Chapter 1: Chemistry in Our Lives		
Chapter 2: Chemistry in Measurement		
<b><i>Lab: Check in /Lab safety presentation</i></b>		
<b><i>MLK Holiday</i></b>		
Chapter 2: Chemistry in Measurement		
Chapter 3: Matter and Energy		
Chapter 3: Matter and Energy		
<b><i>Experiment 1. Laboratory Techniques Lab</i></b>		
Chapter 4: Atoms and Elements		
Chapter 4: Atoms and Elements		
Review Chapters 1-4		
<b><i>Experiment 2. Measurement and Density</i></b>		
Exam 1: Chapters 1-4		

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5	10-Feb	Mon	Chapter 5: Electronic Structure of Atoms and Periodic Trends <b>Lab: Experiment 3. Changes; Substances</b>
	12-Feb	Wed	Chapter 5: Electronic Structure of Atoms and Periodic Trends Chapter 6: Ionic and Molecular Compounds
6	17-Feb	Mon	Chapter 6: Ionic and Molecular Compounds <b>Lab: Experiment 4. Detecting and Measuring Radiation</b>
	19-Feb	Wed	Chapter 7: Chemical Quantities
7	24-Feb	Mon	Chapter 7: Chemical Quantities Chapter 8: Chemical Reactions <b>Lab: Experiment 5. Percentage Composition of a Compound</b>
	26-Feb	Wed	Chapter 8: Chemical Reactions
8	2-March	Mon	Review: Chapter 5-8 <b>Lab: Experiment 6. Ion-Combination Reactions</b>
	4-March	Wed	Exam 2: Chapter 5-8
9	16-March	Mon	Chapter 8: Chemical Reactions <b>Lab: Experiment 7. Electrolytes</b>
	18-March	Wed	Chapter 9: Chemical Quantities in Reactions
10	23-March	Mon	Chapter 9: Chemical Quantities in Reactions Last day for student-initiated with <b>Lab: Experiment 8. Oxygen</b>
	25-March	Wed	Chapter 10: Bonding and Properties of Solids and Liquids
11	30-March	Mon	Chapter 10: Bonding and Properties of Solids and Liquids Chapter 11: Gases <b>Lab: Experiment 9. Hydrogen</b>
	1-April	Wed	Chapter 11: Gases
12	6-April	Mon	Chapter 11: Gases <b>Lab: Experiment 10. Percent Composition of a Mixture</b>
	8-April	Wed	Chapter 11: Gases
13	13-April	Mon	Review for Exam Chapters 9-11 <b>Lab: Experiment 13. Acids and Bases/Check-out</b>
	15-April	Wed	Exam 3: Chapters 9-11
14	20-April	Mon	Chapter 12: <i>Solutions</i>
	22-April	Wed	Chapter 12: <i>Solutions</i>
15	27-April	Mon	Chapter 14: Acids and Bases and Bases
	29-April	Wed	Chapter 14: Acids and Bases and Bases Review for Final*
16	4-May	Mon	Final Exam

This schedule is subject to change. You will be informed of any changes to the syllabus by email, blackboard, or class announcements.

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### **Course Grading Information:**

**Exam:** There will be an exam at the end of the discussion of each unit covered. The test date will be announced at least a week in advance. Exams will be given in class and must be completed during one regular class period. Work must be legible and the final answer must be clearly indicated to receive credit. If special accommodations become necessary, arrangements must be made BEFORE the exam date. There are no makeup exams without prior arrangements. Students arriving late to class may not start an exam once the first person completes the exam and leaves the classroom. You may not leave the room during a test. During tests, there are no cell phones or any other electronic devices allowed. You must use the periodic tables, and scratch paper supplied by the department. All tests will be comprehensive and may contain true/false, multiple choice, matching, completion, and short answer questions, as well as problem solving when applicable. The final exam is comprehensive, and there are no exemptions from taking the final. There will be no make-up test for the final exam.

**Quizzes/Outside assignment:** Quizzes may be given each lecture period during the first ten minutes of class throughout the semester. Written quizzes may cover problems/exercises assigned during previous class sessions. Quizzes cannot be made-up, but the lowest grade will be dropped. You may not leave the room during a quiz. If you are not in the classroom when quizzes are passed out, you cannot take the quiz. Do not arrive tardy for class. Class assignments will be given after each lecture to aid the student in understanding the lecture. Class assignments are not graded, but it may be required to finish these assignments at home.

**Lab Grades:** You are encouraged to keep good report (answer) sheets during laboratory sessions. You will submit lab reports at the beginning of class when the next lab exercise is scheduled. Labs cannot be made-up, but the lowest grade will be dropped. Failure to attend a lab will result in a lab grade of zero and a missed lab grade will not be dropped unless prior arrangements to miss that lab have been made.

**Overall Grade:** It is the students' responsibility to keep track of their overall grade based on Quizzes - 15%, Tests - 40%, Final Exam - 20%, and Lab - 25%. If you have trouble calculating your grade, you may ask to see your overall grade. Final grades are based on 90.00+ = A, 80.00-89.99 = B, 70.00-79.99 = C, 60.00-69.99 = D, and less than 60.00 = F.

Cheating of any kind will not be tolerated. If there is any evidence of cheating on any homework, quiz, test, or final, you will receive a zero for that item and cannot make it up or replace it and it cannot be dropped.

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### **Late Work, Attendance, and Make Up Work Policies:**

All students are expected to attend class regularly as required by the MCC administration. Lack of attendance will affect your grade because of missed lecture material, missed homework assignments, and missed quizzes. It has been shown that students who attend class regularly have a higher success rate (read that as passing) than those who chose not to attend class. If a student's absences reach 25 % of the total contact hours in this course, the student must officially withdraw from the course in order to receive a W, before March 27<sup>th</sup>. After this date a student cannot drop the course. It is the student's responsibility to initiate the drop process if he/she decides not to complete the class. If this class is not dropped, then a letter grade will be assigned for the work completed. Students will be counted absent from the beginning of the first official day.

A missed quiz/exam is recorded as a zero and may not be made up unless prior arrangements have been made. Make-up exams/quizzes will be given only with prior arrangements and must be taken immediately upon your return to class. If you arrive tardy and have missed too much of the pre-lab lecture (as determined by the instructor) you may not be allowed to begin the experiment. Please, arrive ON TIME to avoid a zero grade. If you do not complete the lab, you cannot turn in a lab report, and receive a zero grade for that lab. While I encourage you to come to me with questions about answers on assignments anytime, if you wish to dispute a grade or have a grade changed, you must contact me about it within two weeks of the assignment due date or there will be no change to the grade.

### **Student Behavioral Expectations or Conduct Policy:**

Students are expected to maintain classroom decorum that includes respect for other students and the instructor, prompt and regular attendance, and an attitude that seeks to take full advantage of the education opportunity. Please be respectful of the other students in class. Turn off cell phones/electronics. Pay attention in class. Do not be disruptive. If you arrive late, do not try to go to your accustomed seat, but quietly take a chair close to the door. If you are causing a disruption in class, you may be asked to leave.

Cheating of any kind will not be tolerated. If there is any evidence of cheating on any homework, quiz, test, or final, you will receive a zero for that item and cannot make it up or replace it and it cannot be dropped. Tobacco and tobacco product use is prohibited inside college buildings. This includes smokeless products as well as cigarettes, pipes, and cigars.

In a laboratory setting, safety equipment must be worn at all times: long pants/skirt (covering at least the top half of the calf), apron or lab coat, hair back, safety goggles, and, if necessary,

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gloves. No open-toed shoes, shoes with holes in them, shoes that leave the top of the foot exposed, hats of any sort, shorts, food or drink are allowed. If a student is not dressed in the appropriate attire, that student cannot attend lab until the requirements are met. Any student who is not able to attend lab due to inappropriate attire will receive a zero grade for that assignment with no make-up or dropped grade for that assignment. Anyone acting in an unsafe manner will be warned once. If seen without safety equipment or acting improperly a second time, they will be asked to leave the laboratory. They will be allowed to return in 30 minutes to finish their work, if they can. If they are asked to leave more than once for any given experiment, they will receive a zero for that experiment's lab report. Safety is the MOST important part of lab. Students must abide by the general safety regulations as described in the chemistry 1405 laboratory manual.

**\* [Click Here for the MCC Academic Integrity Statement](#)**

([www.mclennan.edu/academic-integrity](http://www.mclennan.edu/academic-integrity))

The link above will provide you with information about academic integrity, dishonesty, and cheating.

**\* [Click Here for the MCC Attendance/Absences Policy](#)**

([www.mclennan.edu/highlander-guide/policies](http://www.mclennan.edu/highlander-guide/policies))

Click on the link above for the college policies on attendance and absences. Your instructor may have guidelines specific to this course.

### **Accommodations/ADA Statement**

Any student who is a qualified individual with a disability may request reasonable accommodations to assist with providing equal access to educational opportunities. Students should contact the Accommodations Coordinator as soon as possible to provide documentation and make necessary arrangements. Once that process is completed, appropriate verification will be provided to the student and instructor. Please note that instructors are not required to provide classroom accommodations to students until appropriate verification has been provided by the Accommodations Coordinator. Instructors should not provide accommodations unless approved by the Accommodations Coordinator. For additional information, please visit [mclennan.edu/disability](http://mclennan.edu/disability).

Students with questions or who require assistance with disabilities involving physical, classroom, or testing accommodations should contact:

[disabilities@mclennan.edu](mailto:disabilities@mclennan.edu)

254-299-8122

Room 319, Student Services Center



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\* **[Click Here for more information about Title IX](#)**

**([www.mclennan.edu/titleix](http://www.mclennan.edu/titleix))**

We care about your safety, and value an environment where students and instructors can successfully teach and learn together. If you or someone you know experiences unwelcomed behavior, we are here to help. Individuals who would like to report an incident of sexual misconduct are encouraged to immediately contact the Title IX Coordinators at [titleix@mclennan.edu](mailto:titleix@mclennan.edu) or to call Dr. Drew Canham (Vice President for Student Success) at 299-8645. Individuals also may contact the MCC Police Department at 299-8911 or the MCC Student Counseling Center at MCC by calling 299-8210. The MCC Student Counseling Center is a confidential resource for students.

McLennan's Title IX webpage (<http://www.mclennan.edu/titleix/>) contains more information about definitions, reporting, confidentiality, resources, and what to do if you or someone you know is a victim of sexual misconduct, gender-based violence or the crimes of rape, acquaintance rape, sexual assault, sexual harassment, stalking, dating violence or domestic violence.

*\* You will need to access each link separately through your Web browser (for example: Internet Explorer, Mozilla, Chrome, or Safari) to print each link's information.*