

MONTGOMERY COLLEGE
TAKOMA PARK/SILVER SPRING CAMPUS
DEPARTMENT OF CHEMISTRY

CHEM 131 – Principles of Chemistry I
2018 Fall Semester

Instructor:

Office:

Email address:

Phone:

Dept. phone: 240-567-1332

Office hours: Will be given as a separate handout.

Course Information:

Course	CRN	Credits	Days	Time	Start - End Dates	Campus	Location	Schedule Type
CHEM131		4.000				TP/SS		Lecture

Text and Supplies, Required:

Text: *Chemistry A Molecular Approach*, by Nivaldo J. Tro (ISBN 0-13-100065-9).

Calculator: Scientific calculator. Programmable and graphing calculators **may NOT** be used for exams and quizzes in this course.

Safety Goggles: OSHA (Occupational Safety and Health Administration) approved chemical goggles.

Non-Latex Gloves

Course Description: First of two related courses (with CHEM 132). Includes concepts of atomic structure, periodic system, chemical bonding, nomenclature, stoichiometry, weight relationships, kinetic-molecular theory, gases, liquids and solids, solutions, chemical reactions, and thermochemistry. (NSLD) **PREREQUISITE:** Either appropriate score on the chemistry placement test, or a grade of C or better in CHEM 099 within the past two years, or consent of department. **PRE- or COREQUISITE:** MATH 093 or MATH 096 or appropriate score on the mathematics placement test. Assessment levels: ENGL 101/101A, READ 120. Three hours lecture, one hour discussion, three hours laboratory each week. Formerly CH 101.

Course Objectives: Course objectives and outcomes will be given as a separate handout.

Collegewide Policies and Procedures:

● **Examinations**

- **Exams:** Several exams will be given during the semester. The exam dates will be announced in class in advance.
- **Quizzes:** On weeks in which exams are not given, a short (10-15 min.) announced quiz will be given.
- **Lecture Worksheets:** Occasionally, you will be given some worksheets.
- **Discussion Section Activities:** Discussion problems will help you master the material. You must be present during discussion for full credit.
- **Final Exam:** the date of the exam can be found on the college website

● Grading

This will be used as a guide for grading:

Chapter Exams, Quizzes and Worksheets	45 %
Total Laboratory	25 %
Discussion Section Activities	5 %
<u>Final Exam</u>	<u>25 %</u>
Total	100 %

Letter Grades will be assigned from the following scale:

<u>Final Average</u>	<u>Final Grade</u>
90-100%	A
80-89%	B
70-79%	C
60-69%	D
<59%	F

● Makeup Policy

All tests and quizzes must be taken at the appropriate time. **If you do not take a quiz or exam at the scheduled time, you will receive a grade of zero for that quiz or exam.** If you have a really valid reason to miss an exam, notifying me **in advance** via telephone, voice mail, or email may permit us to make some necessary arrangements **to take it earlier or before the original exam is returned to the class.**

● Homework

Homework problems will be assigned from the text. These problems will **not** be collected; they are for your benefit. However, you are expected to do all assigned problems, and you may occasionally see some of them on quizzes and exams.

● Classroom Conduct

- The College believes in the premise that students are adults who are responsible for their own actions and who should be free to pursue their educational objectives in an environment that promotes learning, protects the integrity of the academic process, and protects the College community. *Students are invited to be participating members of the educational community within the guidelines of acceptable standards of conduct which can be found on the Montgomery College website http://cms.montgomerycollege.edu/pnp/#Chapter_4*
- During exams and quizzes, no materials may be at your desk other than the exam and a scientific calculator. Use of cell phones is not permitted for calculations.
- Cell phones must be silenced during lectures, exams, or quizzes. Use of a cell phone during a lecture session will result in me asking you to leave class. However, in case of an emergency you may ask the instructor's permission to use a cell phone outside of the classroom.

● Academic Honesty

All students are expected to achieve their goals with academic honor. Cheating, plagiarism, and/or other forms of academic dishonesty or misconduct, examples of which can be found in the Student Code of Conduct, are not to be tolerated. Any student caught cheating in any way on any quiz or exam will automatically receive, **as a minimum penalty, a grade of zero for that work.**

● Attendance

My attendance policy is consistent with that of Montgomery College. Students are expected to attend all class sessions. In cases of excessive absences from class, the instructor may drop the student from the class. "Excessive absences" is defined as one more absence than the number of classes per week during a fall or spring semester. *However, withdrawal from a course is the responsibility of the student.* **Please be advised that stopping to attend the class does not automatically withdraw you from the course.** You will have to fill out the necessary forms with the Registrar's Office. Failure to do so will result in a grade of F.

● Support Services

- Any student who may need an accommodation due to a disability please make an appointment to see me during my office hours. A letter from Disability Support Services (G-SA175; R-CB122; or TP-ST120) authorizing your accommodations will be needed. Any student who may need assistance in the event of an emergency evacuation must identify themselves to the Disability Support Services Office; guidelines for emergency evacuations for individuals with disabilities are found at: www.montgomerycollege.edu/dss/evacprocedures.htm.
- If you are a veteran or on active or reserve status and you are interested in information regarding opportunities, programs and/or services, please visit the Combat2College website at www.montgomerycollege.edu/combat2college/ and/or contact Joanna Starling 240-567-7103 or Joanna.starling@montgomerycollege.edu.

● Delayed Opening or Closing of the College

Because of inclement weather or utility failure or for other reasons, it may be necessary to delay opening or suspend all operations of the College or an individual campus. In cases of delayed opening or if the college is closed, and scheduled classes are canceled, public service announcements will be made on local radio and television stations. *Students should check MC internal communication systems when the College is closed such as:* a) signing up for the Montgomery College ALERT at www.montgomerycollege.edu/emergency, b) checking the Montgomery College Web site, c) accessing student email through the MyMC Portal.

● Communication

The Montgomery College e-mail account is the official means of communication between the faculty member and the student. It is expected that you check this account routinely for official communication. Some items you may find there are: course announcements regarding scheduled exams, quizzes, or homework assignments; invoices, important admission/registration information, waitlist status. To check your e-mail, log into your MyMC online account and locate the e-mail icon in the upper right hand corner of the page.

- **Important Dates and Deadlines** are available at <http://www.montgomerycollege.edu/dates/>.

Last Day to Drop with:

Refund	No Grade, Change Audit/Credit	W Grade
SEP-04-2018	SEP-18-2018	NOV-13-2018

● Some Helpful Notes for the CHEM 131 Student

- Be on time for class. Class attendance will be checked at the beginning of each class.
- Look through the chapter at home before coming to class; that will enable you to absorb the new material faster. Go over the key terms at the end of the chapter. The course format will not be simply traditional formal lectures. Students are expected to come prepared for the material and discussion in class.
- Chemistry has the reputation of being a difficult course. This is partly due to the fact that chemistry needs a combination of skills: such as memorization, problem-solving, experimentation, etc.; therefore, solving problems systematically in class and on homework will enable you to develop problem-solving skills.

● General Education Requirements

CHEM 131 fulfills a General Education Program Natural Sciences Distribution with Laboratory requirement. Montgomery College's General Education Program is designed to ensure that students have the skills, knowledge, and attitudes to carry them successfully through their work and personal lives. This course provides multiple opportunities to develop two or more of the following competencies: written and oral communication, scientific and quantitative reasoning, critical analysis and reasoning, technological competency, and information literacy. For more information, please see www.montgomerycollege.edu/gened.

● Audit Policy

You may choose to audit a class at the time of your initial registration. If you audit a class, you may take exams and quizzes but your course work will **not** be graded.

● Schedule

NOTE: This schedule is tentative and may be subject to change.

Week of:	Topic	Chapter Reference
Aug. 27	Matter, Measurement, and problem Solving	Chapter 1
Sept. 3	Atoms and elements	Chapter 2
Sept. 10	Molecules, Compounds, and Chemical Equations	Chapter 3
Sept. 17	Molecules, Compounds, and Chemical Equations (cont'd.)	Chapter 3
Sept. 24	Chemical Quantities and Aqueous Reactions	Chapter 4
Oct. 1	Gases	Chapter 5
Oct. 8	Thermochemistry	Chapter 6
Oct. 15	The Quantum Mechanical Model of the Atom	Chapter 7
Oct. 22	Periodic Properties of Elements	Chapter 8
Oct. 29	Chemical Bonding I: Lewis Theory	Chapter 9
Nov. 5	Chemical Bonding II: Molecular Shapes, Valence Bond Theory, and Molecular orbital Theory	Chapter 10
Nov. 12	Liquids, Solids, and intermolecular Forces	Chapter 11
Nov. 19*	Solutions	Chapter 12
Nov. 26	Solutions, (cont'd.)	Chapter 12
Dec. 3	Catch-up and/or review	
	FINAL EXAM	

* **Wednesday**, November 21: No classes for students; non-instructional duty day for faculty
November 22-25: College closed for Thanksgiving holiday

● Practice Problems – Home Work

From *Chemistry A Molecular Approach*, by Nivaldo J. Tro: all odd-numbered problems, numbered in blue.