

MONTGOMERY COLLEGE
TAKOMA PARK/SILVER SPRING CAMPUS
DEPARTMENT OF CHEMISTRY

CHEM 099 – INTRODUCTORY CHEMISTRY
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
CHEM099		3.000				TP/SS		Lecture

CRN 21221: THREE EQUIVALENT CREDIT HOURS. NOT APPLICABLE TO A DEGREE OR CERTIFICATE. MAY NOT BE USED TO SATISFY DEGREE REQUIREMENTS.

Text and Supplies, Required:

Text: Introductory Chemistry by Tro, Pearson Prentice Hall
(ISBN-10: 0-13-603586-8 or ISBN-13: 978-0-13-603586-2)

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

Course Description: A treatment of fundamental chemical mathematics, computational methods, metric system, matter, energy, chemical and physical properties, law of conservation of mass-energy, foundations of atomic theories, elements, compounds, formulas, and stoichiometry. Other topics may be covered at the discretion of the instructor. **PREREQUISITE:** A grade of C or better in MATH 080 or its equivalent or consent of department. Assessment levels: ENGL 101/101A, READ 120. Three hours each week. Formerly CH 099A. **THREE EQUIVALENT CREDIT HOURS. NOT APPLICABLE TO A DEGREE OR CERTIFICATE. MAY NOT BE USED TO SATISFY DEGREE REQUIREMENTS. NOT INCLUDED IN GPA CALCULATION.**

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.
- **Final Exam:** the date of the final exam can be found on MYMC

Grading

This will be used as a guide for grading:

Chapter Exams, Quizzes	65 %
Assignments/worksheets	10 %
Final Exam	25 %
Total	100 %

Letter Grades will be assigned from the following scale:

<u>Final Grade</u>	<u>Final Average</u>
A	100.0 – 90.0 %
B	89.9 – 80.0 %
C	79.9 – 70.0 %
U	≤69.9 %

● **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

● 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-03-2018	SEP-17-2018	NOV-12-2018

● Some Helpful Notes for the CHEM 099 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.

● 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.

● Important Student Information Link

In addition to course requirements and objectives that are in this syllabus, Montgomery College has information on its web site (see link below) to assist you in having a successful experience both inside and outside of the classroom. It is important that you read and understand this information. The link below provides information and other resources to areas that pertain to the following: student behavior (student code of conduct), student e-mail, the tobacco free policy, withdraw and refund dates, disability support services, veteran services, how to access information on delayed openings and closings, how to register for the Montgomery College alert System, and finally, how closings and delays can impact your classes. If you have any questions please bring them to your professor. As rules and regulations change they will be updated and you will be able to access them through the link. If any student would like a written copy of these policies and procedures, the professor would be happy to provide them. By registering for this class and staying in this class, you are indicating that you acknowledge and accept these policies. <http://cms.montgomerycollege.edu/mcsyllabus/>

● Schedule

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

Week of	Topic(s)
Aug. 27	CH 1: Syllabus / The Chemical World CH 2: Measurement and Problem Solving
Sept. 3	CH 2: Measurement and Problem Solving CH 3: Matter and Energy
Sept. 10	CH 3: Matter and Energy
Sept. 17	CH 4: Atoms and Elements
Sept. 24	CH 5: Molecules and Compounds
Oct. 1	CH 5: Molecules and Compounds
Oct. 8	CH 6: Chemical Composition
Oct. 15	CH 7: Chemical Reactions
Oct. 22	CH 8: Quantities in Chemical Reactions (Calculations)
Oct. 29	CH 13: Solutions
Nov. 5	CH 9: Electrons in Atoms (electron configuration) / Periodic Table
Nov. 12	CH 10: Chemical Bonding
Nov. 19*	CH 11: Gasses
Nov. 26	CH 12: Liquids, Solids, and intermolecular forces
Dec. 3	CH 1-13: 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

1. You should attempt all practice problems within the text.
2. All of the odd (blue) problems at the end of the chapter answers are given at the end of the book so you should do as many of these problems as possible.
3. Remember to practice problems early and often to make sure you have a good handle on the material.

CHEM099 Course Outcomes
• Use dimensional analysis to perform calculations and express results of calculations with correct units and number of significant figures.
• Identify the various states of matter and describe the common physical properties of each state.
• Identify and distinguish physical and chemical properties and changes.
• Describe the major components of the atom and write symbols for atoms, ions, and isotopes.
• Determine nomenclature and formulas for ionic and covalent compounds.
• Convert moles, masses, and numbers of particles.
• Determine percent composition and understand and apply mole concept to determine empirical and molecular formulas.
• Balance chemical reactions, classify reaction types, and determine products of reactions.
• Use stoichiometry and balanced equations to determine amounts and masses of substances used up and produced in reactions as well as percent yields.
• Determine solution concentrations and calculate the amounts of materials involved in solution reactions
• Analyze and solve problems that include a combination of concepts from various chapters.