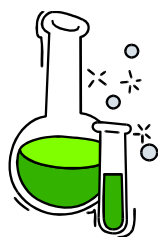


Spring 2012



CHM 151\*\*\*

General Chemistry I

3 credit hours

INSTRUCTOR: Dr. Paul Gilletti

EMAIL: [gilletti@mesacc.edu](mailto:gilletti@mesacc.edu)

OFFICE: Building 15 PS-209

PHONE: Office 480.461-7685

Web Page: <http://www.mc.maricopa.edu/~gilletti/> (Many of my Powerpoint presentations and old quizzes and exams are available)

**Office Hrs PS-209:** M 11:00-11:50, T 3:00-3:50, W 3:00-3:50, F 11:00-11:50

**Tutoring Center (PS-100):** R 10:00-10:50

and by appointment. **..DROP IN I GET LONELY...**

TEXT: GENERAL CHEMISTRY, 9th ed. Ebbing & Gammon (2009). The accompanying Student Solutions Manual is **STRONGLY RECOMMENDED**

REQUIRED ITEMS: Calculator with scientific notation (log, ln, x<sup>y</sup>).

A **SEPARATE, Homework Only Notebook** (Thin spiral or stitched composition type) is required for assigned homework problems (see end of syllabus for assigned homework). Homework notebooks will be inspected during each exam and students will be given 0-5 points extra credit on their cumulative score. I suggest you work problems in detail with reference notes written to yourself on how you solved the problems, i.e. followed example on page 127, this will enable you to form a study guide and to review more efficiently for exams. There is a very strong correlation between the amount of homework done and exam scores.

Optional Material:**OWL on-line Homework and Tutoring Program:** Cengage learning: <http://www.cengage.com/owl/> There is a cost for this system.

**CELL PHONES: MAY NOT BE USED DURING CLASS and NO TEXTING.**

COMPUTERS are available to students in the library. If you have problems running any of the software, be sure to ask the personnel or see me.

**From your Text Book:** Your textbook has a companion web site with many useful items such as practice tests and quizzes and video lessons. See your textbook for the website and other information:

[http://college.cengage.com/chemistry/general/ebbing/general\\_chem/9e/student\\_home.html](http://college.cengage.com/chemistry/general/ebbing/general_chem/9e/student_home.html)

**Other Practice tests and quizzes on the Internet (These are for different books, but each of them contain practice quizzes, tests and other material):**

**Silberberg Book (4<sup>th</sup> edition):** This site provides practice quizzes that are graded online and other learning aides:

[http://highered.mcgraw-hill.com/sites/0072396814/student\\_view0/index.html](http://highered.mcgraw-hill.com/sites/0072396814/student_view0/index.html)

9<sup>th</sup> Ed of Brown and Lemay. This contains practice quizzes and exams that are graded online. It is good practice for quizzes and exams.

[http://wps.prenhall.com/esm\\_brown\\_chemistry\\_9/1,4647,169060,.html](http://wps.prenhall.com/esm_brown_chemistry_9/1,4647,169060,.html)

(General Chemistry Ralph H. Petrucci, William Harwood, F. Geoffrey Herring 8<sup>th</sup> Edition). This site has more practice quizzes. <http://cw.prenhall.com/petrucci/>

**ATTENDANCE:** Attendance will be taken each class period and a withdrawal (W/Y) **MAY** be initiated after three consecutive absences. Withdrawal from class is the student's responsibility. See the current Mesa Community College catalog and paragraph below for withdrawal procedures. It is my experience that attendance and class performance are very closely related, arrive prepared and on time each day.

**WITHDRAWAL:** See your student schedule in [my.maricopa.edu](http://my.maricopa.edu) for the Last Day to Withdraw without an Instructor Signature for each class in which you are enrolled (This is the first seven weeks from when the class started). After that time your instructor's signature is required. (Refer to the Important Deadlines for Students to determine the Last Day Student Initiated Withdrawal will be accepted.) . Either a withdrawal passing (W) or a withdrawal failing (Y) may be given, based upon student performance\*\*\*.

**STUDY HABITS AND WORK ETHIC:** This is a rigorous class. It requires a great deal of time to master the material covered in this course. Students who attend class regularly and work assigned problems have a much greater success rate. It is strongly suggested that you study a **MINIMUM** of three hours for every lecture hour. If your background is weak, you should plan on spending more time. **FREE TUTORING is available in PS-100 (drop in), SMARTHINKING online tutoring (<http://www.mesacc.edu/library/LE/smart-thinking.html>), Departmental review and tutoring sessions**, and during my office hours. **I also recommend forming study groups.** Please see me if you are having difficulty.

**ACADEMIC DISHONESTY POLICY:** See the current MCCD student handbook on the academic dishonesty policy. Academic dishonesty may include: representation of the work of other's as one's own, use of unauthorized assistance in academic work, failure to cite sources used, copying the work of another student on any form of a test, helping others cheat, etc. Repercussions can be found in the student handbook and range from a warning to dismissal from the course with a failing grade.

**STUDENTS WITH DISABILITIES:** Contact Disability and Resource Services at 480.461.7447 and see me to discuss your accommodations needs.

**EARS (Early Alert Referral System)**  
**MCC Early Alert Program (EARS)**

Mesa Community College is committed to the success of all our students. Numerous campus support services are available throughout your academic journey to assist you in achieving your educational goals. MCC has adopted an Early Alert Referral System (EARS) as part of a student success initiative to aid students in their educational pursuits. Faculty and Staff participate by alerting and referring students to campus services for added support. Students may receive a follow up call from various campus services as a result of being referred to EARS. Students are encouraged to participate, but these services are optional.

Early Alert Web Page with Campus Resource Information can be located at: <http://www.mesacc.edu/students/ears> or locate the "Early Alert" selection at the "mymcc" link from MCC's home page.

M.L.K. DAY: Jan. 16.....NO CLASS  
PRESIDENTS' DAY: Feb. 20 .....NO CLASS  
SPRING ~~BREAK~~ STUDY WEEK: March 12-18

LAST DAY OF CLASS: May 6

FINAL EXAM: MWF 10:00 a.m. class.....Wed. May 9 10:00-11:50 a.m.

GRADING POLICY:

At least 9 quizzes worth 25 points each will be given and the 8 highest scores will be counted. **10 to 15 minutes will be allowed for each quiz.**

3-4 exams\*---100 points each will be given. Times will be announced at least one week in advance as course dictates.

\*Bonus Points:0-5 Points will be given for homework in homework notebook, **added at the time of each exam.**

Final examination--200 points (comprehensive ACS final).

A	B	C	D	
90-100%	80-90%	70-80%	60-69%	(of <b>HIGH TOTAL</b> i.e. curved from highest student)

NO Quizzes or exams will be given after the scheduled times. Extraordinary circumstances may dictate otherwise.

\*\*\*This is the first of a two-semester course, providing a detailed study of the principles of chemistry for science majors and students in pre-professional curricula. Prerequisites: CHM 130 and CHM 130LL or one year high school chemistry and completion of intermediate Algebra or the equivalent.

\*\*\* Lab is a separate one-credit (CHM 151LL) course. Unless previously taken, a student must be enrolled in a lab.

**COURSE COMPETENCIES:** Available on the Internet

[http://www.maricopa.edu/academic/ccta/curric/search\\_subject.php?loc=CHM151](http://www.maricopa.edu/academic/ccta/curric/search_subject.php?loc=CHM151)

**General Information:** (we will cover chapters 1-12 CHM151)

**ALL worked problems should be kept in a SEPARATE, homework only, thin spiral or stitched composition type, to be handed in on test dates. Please write in the starting time (and date) and ending time of each problem working session to help you in "time tracking".** When working problems you should show as much detail as possible including writing notes to yourself and reference pages so studying at test time becomes a review and your homework notebook is your study guide. Bonus Points: 0-5 Points will be given for homework in homework notebook, added at the time of each exam.

Hint: When solving problems always determine **what is being asked first** and **its units** (and if necessary, its place in a formula), then what is given and **its units** (and if necessary, how it fits in a formula), and finally convert what is given into what is desired to solve the problem.

**Answers to the Blue end of chapter problems** are located beginning on Page A26 near the end of book. More detailed solutions are found in the student solution manual. **THE STUDENT'S SOLUTION MANUAL IS A VERY USEFUL RESOURCE WHEN DOING PROBLEMS, I HIGHLY RECOMMEND IT.**

## OVERVIEW OF TEXTBOOK:

GENERAL CHEMISTRY, 4th ed. Ebbing & Gamon (2009).

Inside of covers: Front has periodic table. Back has useful physical constants, **conversion factors**, and location of tables. In addition it is recommended that frequently used numbers be written inside the covers for quick reference.

Appendix A. Page A-1: **MATH REVIEW** (consult when necessary)

Appendix C. Page A-8: **THERMODYNAMIC QUANTITIES FOR SELECTED SUBSTANCES.**

Appendix D. Page A-12: Electron Configurations of Atoms in the Ground State

Appendix E: Page A-13: **ACID-IONIZATION CONSTANTS.** Contains  $K_a$  values.

Appendix F: Page A-13: **BASE-IONIZATION CONSTANTS.** Contains  $K_b$  values.

Appendix G: Page A-15: **SOLUBILITY PRODUCT CONSTANTS.** Contains  $K_{SP}$  values.

Appendix H: Page A-16: **FORMATION CONSTANTS OF COMPLEX IONS.** Contains  $K_f$  values.

Appendix I. Page A-16: **STANDARD REDUCTION POTENTIALS.**

Page A-18: **Answers to Selected Exercises found within the chapters.**

Page A-22: Answers to Concept Checks.

Page A-25: Answers to Self-Assessment Questions.

Page A-26: Answers to Selected Odd-Numbered Problems. Note: The **Student Solutions Manual** provides detailed solutions for most of these problems.

Glossary of terms: Page A-41

### \*\*\*ASSIGNED PROBLEMS\*\*\*

TO BE DONE IN DETAIL IN YOUR HOMEWORK NOTEBOOK (see previous details).



**Chapter 1: Chemistry and Measurement** (all problems are to be done in your homework notebook)

**The METHODS we use to solve these problems are more important than the problems themselves. Concentrate on the units and how they cancel.** Example:  $454\text{mg} = ? \text{g}$ , Method: since  $m = 10^{-3}$   $\frac{454\text{mg}}{m} = 0.454\text{g}$  note:

the “m’s” cancel leaving just grams as the unit.

Look over Tables 1.1, 1.2, 1.3, and 1.4.

**Assigned Problems (Chapt 1 page 33):** Be Sure to read the chapter (learning to read science is a very important part of your overall education). Look over *Key Equations* and *Summary of Facts and Concepts* (page 29). **37, 43, 45, 47, 51, 53, 57, 59, 61, 65** (remember if the exponent gets larger, the number must get smaller to maintain the same value), **67, 68, 69, 71** (note the combination of salt and ice results in a lower temperature than the initial temperature of either the salt or the ice), **73, 75, 77, 79, 81, 83, 85, 87, 88, 89, 90, 97, 101** (compare the ratios), **105, 109, 113, 115, 119, 123, 125, 127, 131, 133, 135**. **Do extra conversions and problems if necessary.**

Now look over the Self-Assessment and Review Questions on page 31.

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**Chapter 2: Atoms, Molecules, and Ions** (all problems are to be done in your homework notebook)

Be sure to READ the chapter! Note the tables of Common Ions and Polyatomic Ions pages 62-63. Read through the periodic table twice.

Naming compounds (nomenclature) will be covered in lab, but you will be held responsible in lecture. Study the rules in the lab manual and in this book. If you are not in lab, you may want to find a laboratory class to attend as a “guest” when this topic is being covered.

Balancing equations will also be covered in lab.

**Assigned Problems (Chapt 2 page 78):** Be sure to look over *Summary of Facts and Concepts* (page 74) **37, 39, 43, 45, 47, 51, 57, 59, 61, 67, 69, 71, 75, 77, 79, 81, 83, 85, 89, 91, 93, 97, 99, 113, 115, 117, 119, 121, 125**  
Balancing equations hint: If any element is found in more than one place on the same side, leave it for last. Balance the others first and then that (or those) element(s).

Now look over the Self-Assessment and Review Questions on page 76.

**Chapter 3: Calculations with Chemical Formulas and Equations.** (all problems are to be done in your homework notebook).

This chapter may well be the most important chapter in CHM 151. A thorough understanding and mastery of this material is imperative if one is to be successful in CHM 152. Many problems are assigned and they will require a considerable amount of time. Work on a regular and consistent basis. \*\*\*The methods we use to solve these problems are more important than the problems themselves. Concentrate on the units and how they cancel.

**Assigned Problems (Chapt 3 page 116):** 19, 27, 33 (use Avogadro's number when calculating the mass of individual atoms or molecules since the atomic masses on the periodic table can be thought of as grams per mole), 37, 39, 41, 43, 45 a and c, 49, 53 (create a conversion factor with the percent), 57, 61, 65, 69, 75, 79, 81, 83, 85, 93, 97, 105, 109.

Now look over the Self-Assessment and Review Questions on page 114.

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TO BE DONE IN DETAIL IN YOUR HOMEWORK NOTEBOOK.

**Chapter 4: Chemical Reactions** (all problems are to be done in your homework notebook)

Molarity = M = moles solute ÷ Liters solution = mol/L and can be used as a conversion factor.

Dilution formula:  $M_1V_1 = M_2V_2$  be sure you can recognize a dilution problem.

Study and know how to work with the Solubility Rules in Table 4.1 on page 129.

**Assigned Problems(Chapt 4 page 167):** 29 (see table 4.1), 31, 33, 35, 37, 39, 41 (learn the seven strong acids, the rest are classified as weak), 43 (focus on the water as H OH as we did in class and these equations become easy to balance), 44, 45, 47, 51 (refer to table 4.4), 53, 55, 57, 59, 61 (oxidizing agents gain e<sup>-</sup>s and become less positive, reducing agents lose e<sup>-</sup>s and become more positive), 63, 67, 69, 71, 73, 75, 77, 79, 80, 81 (The concentrations of the K<sup>+</sup> and Ca<sup>2+</sup> ions can be calculated from the dilution formula, but you must find the total moles of the Cl<sup>-</sup> ions and the final volume.) 83, 85, 89, 91, 99 (refer to table 4.1), 105, 109, 111, 113, 135, 143, 145.

Now look over the Self-Assessment and Review Questions on page 165.

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TO BE DONE IN DETAIL IN YOUR HOMEWORK NOTEBOOK.

**Chapter 5: The Gaseous State** (all problems are to be done in your homework notebook). Be Sure to Look at Key Equations (page 212).

$$: P_1V_1T_2 = P_2V_2T_1 \quad PV=nRT \quad P_{\text{total}} = P_a + P_b + P_c + \dots \quad \frac{r_1}{r_2} = \sqrt{\frac{M_2}{M_1}} \quad \mu = \sqrt{\frac{3RT}{M_m}}$$

Note: All temperatures must be in Kelvin.

STP Standard Temperature and Pressure (273K and 1atm).

The volume occupied by 1 mol of ideal gas at STP = 22.4 L

**Assigned Problems(Chapt 5 page 216):** 37, 39, 41, 43, 45, 47, 51, 53, 57, 59, 61, 63, 65, 67, 69, 71, 73, 75, 77, 81, 83, 85, 89, 93, 99, 117, now try: 29, 31, 33.

Now look over the Self-Assessment and Review Questions on page 214.

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## Chapter 6: Thermochemistry

### Key Concepts and Equations Page 252.

Terms: **Ex**othermic---**Exit**: heat exits (-) the system.

**En**dothermic---**Enter**: heat enters (+) the system.

Units of Specific Heat:  $\frac{\text{J}}{\text{g} \cdot \Delta^\circ\text{C}} = \frac{\text{J}}{\text{g} \cdot \Delta\text{K}}$  or  $\frac{\text{cal}}{\text{g} \cdot \Delta^\circ\text{C}}$  note: 4.184 J = 1 calorie

**Heat capacity vs Specific heat:** Heat capacity is the amount of heat needed to raise the entire object under consideration 1 degree Celsius (Joules/ $^\circ\text{C}$ ). Specific heat is the amount of heat needed to raise one gram of a specified substance 1 degree Celsius (Joules/g  $^\circ\text{C}$ ).

**QUESTION:** Refer to the Table of Thermodynamic Data on Pages A-8 – A-11. Which elements, and in what physical state have a  $\Delta\text{H}_f^\circ$  value of zero (hint: what is the physical state of the element of interest at  $25^\circ\text{C}$ )?

**Assigned Problems (Page 255):** 33, 41, 47, 51, 53, 55, 57, 59, 61, 63, 65, 69, 71, 72, 73, 77, 79 (use the table values), 81, 85, 89, 93, 95, 97, 99, 101, 105, 113, 117, 139.

Now look over the Self-Assessment and Review Questions on page 254.

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## Chapter 7: Quantum Theory of the Atom

### Key Concepts and Key Equations Page 286.

Don't get hung up on one problem, go on, do what you can, and then return to that/those problems."

$c = v\lambda$   $c = \text{speed of light} = 3.00 \times 10^8 \text{ m/s}$

$E = hv$   $h = \text{Planck's constant} = 6.63 \times 10^{-34} \text{ J}\cdot\text{s}$  or  $\frac{6.63 \times 10^{-34} \text{ J}\cdot\text{s}}{\text{"photon"}}$

**SINCE BOTH OF THE ABOVE FORMULAS CONTAIN  $v$  THEY ARE RELATED AND CAN BE EXPRESSED IN TERMS OF ONE ANOTHER.....( $E = hc/\lambda$ )**

$E_n = (-R_H)(1/n^2)$   $R_H = \text{Rydberg Constant} = 2.18 \times 10^{-18} \text{ J}$   $n = \text{shell or period} = 1, 2, 3, 4..$

also  $\Delta E = E_{\text{FINAL}} - E_{\text{INITIAL}} = -R_H \left( \frac{1}{n_f^2} - \frac{1}{n_i^2} \right)$

The four Quantum numbers are listed below: (they describe the location of an electron in an atom)

$n$  = the shell or period (note the seven periods going down the periodic table)

$l$  = the subshell (s, p, d, f) and gives the shape of the orbital

$m_l$  = the orbital within the subshell (i.e.  $p_x$ ,  $p_y$ , or  $p_z$ )

$m_s$  = the spin of the electron (either  $+1/2$  or  $-1/2$ )

**Assigned Problems (page 289):** 35, 37, 39, 43, 45, 47, 51 (this will help with atomic spectra lab), 53, 55, 65, 75, 79, 89, 91, 107.

Now look over the Self-Assessment and Review Questions on page 287.

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## Chapter 8: Electron Configurations and Periodicity

\*\*\* Be sure to know, understand, and **Hund's Rule** (when adding electrons to a subshell, each orbital in the subshell will get an electron before one orbital can get two) and the **Pauli Exclusion Principle** (no two electrons in an atom can have the 4 quantum numbers "they can't be in the same place at the same time").

**Assigned Problems (page 324): 41, 43, 47, 49, 51, 53, 55, 57** (just do the 3d and the 4s), **59, 61, 63, 65, 67, 77, 81, 83, 101, 103, 105, 109.**

Now look over the Self-Assessment and Review Questions on page 322.

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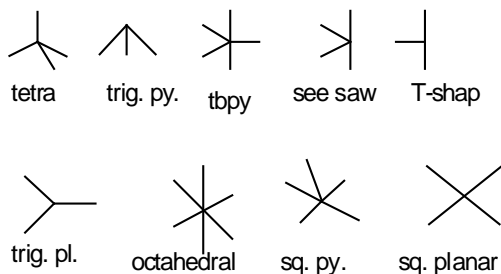
## Chapter 9: Ionic and Covalent Bonding.

**Assigned Problems (page 368): 35, 37, 39, 41, 43, 45, 47, 49, 51, 53, 55, 57, 59, 61, 63, 65, 67, 68, 69** (you must first complete the electron configuration), **71, 73, 75, 77, 79, 81** (table 94 page 358), **83, 85, 87, 89, 91, 95, 97, 99, 101, 107, 109, 129.**

Now look over the Self-Assessment and Review Questions on page 366.

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**Chapter 10: Molecular Geometry and Chemical Theory.** This material is very important for students who plan to take organic chemistry.



**Assigned problems (page 413): 33, 35, 37, 39, 41, 43, 45, 47, 49, 53, 57, 63, 69, 71, 99.**

Now look over the Self-Assessment and Review Questions on page 411.

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## **Chapter 11: States of Matter; Liquids and Solids**

**Assigned problems (page 470): 37, 39, 41, 43, 47** (heat lost by ice = heat gained by water), **49** (use the Clausius-Clapeyron Eq. and refer to example 11.2), **51, 55, 57, 61, 65, 69, 71, 73, 77, 79, 81, 105, 109, 117.**

Now look over the Self-Assessment and Review Questions on page 467

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**Chapter 12: Solutions**

**Assigned problems (page 518): 37, 39, 41, 43, 35, 47** (Use Henry's law), **49** (use the percent to create a ratio to use as a conversion factor), **51, 53, 55, 57, 63, 65, 69, 71, 73** (just like in lab), **75, 79.**

Now look over the Self-Assessment and Review Questions on page 516.

# PERIODIC TABLE OF THE ELEMENTS

<b>1A</b>																	<b>8A</b>
1 <b>H</b> 1.008												<b>2</b> <b>He</b> 4.003					
<b>2A</b>												<b>3A</b>	<b>4A</b>	<b>5A</b>	<b>6A</b>	<b>7A</b>	
3 <b>Li</b> 6.941	4 <b>Be</b> 9.012											5 <b>B</b> 10.81	6 <b>C</b> 12.01	7 <b>N</b> 14.01	8 <b>O</b> 16.00	9 <b>F</b> 19.00	10 <b>Ne</b> 20.18
11 <b>Na</b> 22.99	12 <b>Mg</b> 24.31											13 <b>Al</b> 26.98	14 <b>Si</b> 28.09	15 <b>P</b> 30.97	16 <b>S</b> 32.07	17 <b>Cl</b> 35.45	18 <b>Ar</b> 39.95
		<b>3B</b>	<b>4B</b>	<b>5B</b>	<b>6B</b>	<b>7B</b>	<b>8B</b>				<b>1B</b>	<b>2B</b>					
19 <b>K</b> 39.10	20 <b>Ca</b> 40.08	21 <b>Sc</b> 44.96	22 <b>Ti</b> 47.88	23 <b>V</b> 50.94	24 <b>Cr</b> 52.00	25 <b>Mn</b> 54.94	26 <b>Fe</b> 55.85	27 <b>Co</b> 58.93	28 <b>Ni</b> 58.69	29 <b>Cu</b> 63.55	30 <b>Zn</b> 65.39	31 <b>Ga</b> 69.72	32 <b>Ge</b> 72.61	33 <b>As</b> 74.92	34 <b>Se</b> 78.96	35 <b>Br</b> 79.90	36 <b>Kr</b> 83.80
37 <b>Rb</b> 85.47	38 <b>Sr</b> 87.62	39 <b>Y</b> 88.91	40 <b>Zr</b> 91.22	41 <b>Nb</b> 92.91	42 <b>Mo</b> 95.94	43 <b>Tc</b> (98)	44 <b>Ru</b> 101.1	45 <b>Rh</b> 102.9	46 <b>Pd</b> 106.4	47 <b>Ag</b> 107.9	48 <b>Cd</b> 112.4	49 <b>In</b> 114.8	50 <b>Sn</b> 118.7	51 <b>Sb</b> 121.8	52 <b>Te</b> 127.6	53 <b>I</b> 126.9	54 <b>Xe</b> 131.3
55 <b>Cs</b> 132.9	56 <b>Ba</b> 137.3	57 <b>La</b> 138.9	72 <b>Hf</b> 178.5	73 <b>Ta</b> 181.0	74 <b>W</b> 183.8	75 <b>Re</b> 186.2	76 <b>Os</b> 190.2	77 <b>Ir</b> 192.2	78 <b>Pt</b> 195.1	79 <b>Au</b> 197.0	80 <b>Hg</b> 200.6	81 <b>Tl</b> 204.4	82 <b>Pb</b> 207.2	83 <b>Bi</b> 209.0	84 <b>Po</b> (209)	85 <b>At</b> (210)	86 <b>Rn</b> (222)
87 <b>Fr</b> (223)	88 <b>Ra</b> 226.0	89 <b>Ac</b> 227.0	104 <b>Unq</b> (261)	105 <b>Unp</b> (262)	106 <b>Unh</b> (263)	107 <b>Uns</b> (262)	108 <b>Uno</b> (265)	109 <b>Une</b> (266)									

58 <b>Ce</b> 140.1	59 <b>Pr</b> 140.9	60 <b>Nd</b> 144.2	61 <b>Pm</b> (145)	62 <b>Sm</b> 150.4	63 <b>Eu</b> 152.0	64 <b>Gd</b> 157.3	65 <b>Tb</b> 158.9	66 <b>Dy</b> 162.5	67 <b>Ho</b> 164.9	68 <b>Er</b> 167.3	69 <b>Tm</b> 168.9	70 <b>Yb</b> 173.0	71 <b>Lu</b> 175.0
90 <b>Th</b> 232.0	91 <b>Pa</b> 231.0	92 <b>U</b> 238.0	93 <b>Np</b> 237.0	94 <b>Pu</b> (244)	95 <b>Am</b> (243)	96 <b>Cm</b> (247)	97 <b>Bk</b> (247)	98 <b>Cf</b> (251)	99 <b>Es</b> (252)	100 <b>Fm</b> (257)	101 <b>Md</b> (258)	102 <b>No</b> (259)	103 <b>Lr</b> (260)

### Student Study Schedule

Use this schedule to plan your week. Schedule chemistry and other classes or labs. Allow two to three study hours between each chemistry lecture before the next lecture occurs. Allow study time for all classes and labs. Then include work, travel time, family time, meals, sleep, exercise, etc. Remember you NEED SLEEP.

Time	Monday	Tuesday	Wednesday	Thursday	Friday
5-6					
6-7					
7-8					
8-9					
9-10					
10-11					
11-12					
12-1					
1-2					
2-3					
3-4					
4-5					
5-6					
6-7					
7-8					
8-9					
9-10					
10-11					
11-12					

**WEEKEND STUDY TIMES. DON'T WASTE FRIDAY AFTERNOON AND EVENING AS WELL AS SATURDAY AND SUNDAY.**

## CHEMISTRY INFORMATION

*Please complete and return at the time of the next class meeting.*

Semester: Spring Year: 2011 Course: CHM151 Section: 49243

Name: \_\_\_\_\_ Phone: \_\_\_\_\_ I.D.# \_\_\_\_\_

Email address: \_\_\_\_\_

Major **and** CAREER Goal\*: \_\_\_\_\_

Number of Hours You Are Working per Week: \_\_\_\_\_

Number of Credit Hours You are Taking: \_\_\_\_\_

Previous <b><u>Chemistry</u></b> Courses Taken:	<b><u>Date Taken</u></b>	<b><u>Name and/or Location of School</u></b>
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High School Course(s): _____	_____	_____
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_____	_____	_____
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College <b>Chemistry</b> Course(s): _____	_____	_____
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_____	_____	_____
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Highest Level Math you have completed: \_\_\_\_\_

Math Currently being taken: \_\_\_\_\_

Future Chemistry courses that you are planning to take at MCC:

\_\_\_\_\_

**Write a brief statement detailing the combination of work ethic, ability, time commitment, and grades that are required to succeed in the major and career goal that you listed above.**