Note 1: Although technically this is an online class, live attendance is required for each lecture and lab period. Collaborate will provide an attendance record, so no other attendance need be taken. Points will be awarded each class period for full-time attendance and lab points also require full-time attendance in lab. The instructor reserves the right to deny attendance points to students who do not attend the entire lecture or lab period.

Note 2: Although Chem 1306 and 1106 are listed as two separate courses, they are in fact linked together in content in such a way that you must take them simultaneously. You will receive the same grade for Chem 1106 as for Chem 1306. Thus, if you drop one course without dropping the other, you will automatically fail the one you did not drop. **The records office will not automatically drop one course if you drop the other.** If you are not already enrolled in both Chem 1306 and 1106, contact Dr. Maxwell or your academic advisor to remedy this situation.

Dr. Janet L. Maxwell  
janet.maxwell@angelo.edu  
Office Hours:  
MWF 10:00 – 11.00 am  
Tuesday 2:00 – 3:00 pm  
Thursday 11 am - noon  
or by appointment

All office hours will be held online via Blackboard Collaborate. A link to access office hours can be found in the left column on the home page of your Blackboard course.

**Required Texts:**

“General, Organic and Biological Chemistry”, 4th edition by Frost and Deal  


Also Required:  
1) Registration/Participation in the Sapling Learning For-Credit Homework Software System (ISBN: 978098338590)  
3) Academic/Daily Planner  
4) A scientific calculator (Texas Instruments is the recommended brand, but other brands are acceptable)  
5) Web cam and required software for Respondus Lock-down Browser and monitor.

**Course Description:**

An Introduction to General, Organic and Biological Chemistry with emphasis on the role of Chemistry in health and illness. Intended for nurses and allied health professionals.

**Student Learning Outcomes:**

A. Introduction to Chemistry - Students will be able to:
1. Classify a sample of matter as a mixture, a compound, or an element; and describe a mixture as homogenous or heterogenous.

2. Know the names and symbols of common elements, the differences between metals, metalloids and nonmetals, and the organization of the periodic table.

3. Convert a measurement from one unit to another using a conversion factor, report a measured value to the correct number of digits, be able to use a calculator to carry out calculations, be able to round answers to the appropriate number of significant figures, be able to express numbers in scientific notation, to enter numbers in scientific notation correctly into the calculator, to understand the values of numbers expressed using scientific notation and to understand how to find the percent of a whole or the percent that one number is of another number.

4. Define mass and volume, and know how to express these properties using the metric system and define and solve for density and specific gravity and use density or specific gravity to solve for the mass or volume.

5. Understand and interconvert between temperature scales, understand units of energy and be able to calculate the specific heat of a substance.

6. Distinguish the bulk properties of the three states of matter, and relate these properties to the behavior of the particles that make up the substance.

7. Understand the difference between precision and accuracy.

8. Carry out dosage calculations and use percents in health care applications.

9. Determine whether a process is a physical change or a chemical reaction and write and balance a chemical equation to represent a chemical reaction.

B. Atoms and Radioactivity – Students will be able to:

1. Know the properties of the subatomic particles, and determine the mass and charge of an atom from the number of each type of subatomic particle.

2. Understand the concepts of atomic number and mass number and how these relate to the numbers of protons and neutrons in the nucleus of the atom.

3. Know how isotopes are related to one another, and understand the relationship of atomic weight to the masses of individual atoms.

4. Understand the concepts of radioactivity and radioisotopes and be able to describe and write the equations for the common types of nuclear decay.

5. Understand the units of radioactive disintegration and the concept of half-life.

6. Understand the most common medical applications for radioisotopes.

C. Compounds – Students will be able to:

1. Understand how electrons are arranged in an atom, write electron arrangements for the first 20 elements and understand the octet rule.

2. Predict ion charges for representative elements, and understand how atoms gain and lose electrons to form ions.

3. Predict the formulas of ionic compounds using the ion charges, and learn the names and charges of common transition metal ions.

4. Write the names and formulas of ionic compounds that contain two elements, learn the names and formulas of common polyatomic ions, and write the names and formulas of compounds that contain polyatomic ions.

5. Understand how covalent bonds are formed, use the octet rule to predict the number of covalent bonds an atom can form, draw Lewis structures for molecules that contain single bonds, draw Lewis structures for molecules that contain double or triple bonds, use lines to represent bonding electrons and write names for binary covalent compounds.

6. Use the mole concept to express numbers of formula units, interconvert between moles and masses, understand the significance of Avogadro’s number and use it to interconvert between numbers of atoms and masses in grams.

7. Determine the shapes of molecular compounds. use electronegativities to predict whether a covalent bond is polar or nonpolar, determine the type of charge on each bonding atom and determine the polarity of molecules containing more than one covalent bond.
D. Introduction to Organic Compounds – Students will be able to:
   1. Explain why carbon is uniquely suited to be the main structural element of organic chemistry, and describe the ways in which carbon atoms form covalent bonds.
   2. Learn the names of the first 10 linear alkanes, and use common conventions to draw their structural formulas.
   3. Classify fatty acids based on their structures.
   4. Understand how and why chemists use functional groups to classify organic molecules and how alcohols and amines are categorized as primary, secondary or tertiary.
   5. Distinguish linear and branched alkanes and cycloalkanes, and recognize and draw isomers of simple alkanes.
   6. Name branched alkanes, cycloalkanes and haloalkanes.
   7. Name and draw the cis and trans forms of cycloalkanes and alkenes, and distinguish between constitutional isomers and cis-trans isomers.
   8. Understand the concept of chirality in organic chemistry and be able to distinguish stereoisomers from other types of isomers.

E. Carbohydrates – Students will be able to:
   1. Understand the structural features and typical physical properties of monosaccharides, including the chirality of these molecules.
   2. Understand the concept of organic oxidation and reduction reactions as applied to the concept of reducing sugars.
   3. Understand the formation of ring structures in monosaccharides and the relationship between the anomers of a monosaccharide.
   4. Understand, name and draw the structures of the most common glycosidic linkages in disaccharides and understand the breaking and forming of glycosidic bonds.
   5. Describe the building blocks, linkages and biological functions of the common disaccharides and polysaccharides.
   6. Understand the structure and function of the carbohydrate antigens in blood.

F. Solution Chemistry – Students will be able to:
   1. Identify the solute and solvent in a solution and distinguish between solutions, colloids and suspensions.
   2. Describe and interpret the solubility of a compounds, and predict the effects of temperature and pressure on solubility.
   3. Describe what happens when ionic and molecular compounds dissolve in water and distinguish between strong electrolytes, weak electrolytes and nonelectrolytes.
   4. Determine the number of equivalents per mole for dissolved ions.
   5. Calculate and use milliequivalents per liter, millimoles per liter, molarity, percent concentrations, other common concentration units involving masses of solutes.
   6. Calculate the final volume or concentration of a solution in a dilution, and calculate the volumes of a concentrated solution and water needed to carry out a dilution.
   7. Determine the direction of osmosis and dialysis, and predict the effect of a solution on red blood cells using the overall molarity of the solution.
   8. Understand and explain the different modes of transports of substances across cell membranes.

Student Learning Outcomes will be evaluated using exam questions.

Grading:

Two One-Hour Exams 2 x 200 = 400 pts
(Each one hour exam will be worth 12.903 % of the overall grade)

One Two-Hour Final Exam (comprehensive) 1 x 350 = 350 pts
(The Final Exam will be worth 22.581 % of the final grade)

Sapling Learning Online Homework Grade 120 pts
(The Sapling Homework will be worth 7.742 % of the final grade)

Collaborate Participation Grade 75 pts
(The Collaborate Participation Grade will be worth 4.839 % of the final grade)

Top Hat Participation Grade 75 pts
(The Top Hat Participation will be worth 4.839 % of the final grade)

Quizzes 9 x 20 = 180 pts
(10 quizzes will be given and the lowest quiz grade will be dropped – the sum of the quiz grades will be worth 11.613 % of the final grade)

Lab Grade 14 x 25 = 350 pts
(14 labs will be completed and the one lowest lab grade will be replaced with a perfect score* – the sum of the lab grades will be worth 22.581 % of the final grade)

______________________________
Total = 1550 pts

*Only students with a valid documented excuse can have one lab grade replaced with a perfect score

Students are responsible for monitoring their own grades on Blackboard. The category in Blackboard that accurately reports the current grade is the “Weighted Average”. This column does not always appear on cell phones, but it does appear on a computer.

Total averages within the following ranges at the end of the semester guarantee the student at least the indicated letter grade:

- A 90% of the total or better
- B 80-89% of the total
- C 70-79% of the total
- D 60-69% of the total
- F less than 60% of the total

**One Hour Exams:**

The schedule for the one hour exams can be found on the schedule page for your section in this syllabus. The one hour online exams will open at the official beginning of the class on the day of the test and will close at the official end of class. Each one hour exam will consist of 30 multiple choice questions worth 5 points each. Questions will be in a random, scrambled order.

**Final Exam:**

See the schedule for the date and time of your final exam. The final exam will consist of 50 questions worth 7 points each. Half the final exam will consists of problems covered in the class after Exam 2. The other half of the exam will consist of problems from the material covered before Exam 2. Questions will be in a random, scrambled order.

**Deadline:**

Last Day to drop the course: Friday, April 30

Persons with disabilities which may warrant academic accommodations must contact the Student Life Office, Room 112, University Center, in order to request and to implement academic accommodations.
Blackboard:

Blackboard is a computer learning environment to help you with your studies. To log onto blackboard, type in http://blackboard.angelo.edu into your web browser. Then click the grey “Login” button to the left of the screen. Next type in your username and password. Your username and password are assigned by IT. Please see Dr. Maxwell if you have trouble logging onto Blackboard.

Blackboard Collaborate:

All lecture and lab classes will be held live in the scheduled time period. Please see the link for “Orientation for Collaborate” under Resources in the left column of your Blackboard Course.

Quizzes:

You are expected to work independently on quizzes. Online quizzes using the lockdown browser and monitor will be given over weekends as shown in the course schedule near the end of this syllabus. Quiz topics will include the material from the previous week’s lab and the sections associated with those topics from the textbook as well as additional sections as assigned in class. In order to study for the quizzes, you need to read the textbook sections listed for the quiz topic and work all the practice problems and additional problems listed in “Practice Problems and Additional Problems” handout on Blackboard. Quizzes will be worth 20 points. The time limit for each quiz will be different, depending on how much time Dr. Maxwell thinks is reasonable for the specific quiz topic. You must answer the questions in order, and you cannot backtrack. Ten quizzes will be given and the one lowest quiz grade will be dropped. If you miss the deadline for taking a quiz, make-up quizzes or late quizzes will not be given for any reason.

Respondus Lock Down Browser and Monitor:

Students are required to use the Respondus lock down browser and monitor for each quiz and exam. Students are required to install and test this software before the first quiz is given on the weekend of Jan. 30 and 31. If you cannot install the Respondus lock down browser and monitor so that it works correctly for your computer, you are required to find a computer in one of the computer labs on campus or the library that has the lock down browser and monitor working effectively in order to take your quiz or exam. Please see the “Respondus Lock Down Browser and Monitor” link under Resources in the left column of your lecture Blackboard course.

Practice Problems:

On blackboard there is a document labeled “Practice Problems and Additional Problems by Section”, which can be found under course materials. At the end of each section, there is a list of practice problems and a list of additional problems. The answers to the odd-numbered practice problems and additional problems are given at the end of each chapter. You will be responsible for knowing what problems are assigned for each section to study for quizzes and exams. This information is given in the document labeled “Practice Problems and Additional Problems by Section” found under course materials on blackboard.

Calculators:

Students are expected to have a scientific calculator available during class every day, including days with quizzes or exams. The calculator may be a graphing calculator, or just a regular scientific calculator. Students may NOT use cell phones in place of calculators during quizzes or exams.
Attendance Policy:
Roll will be automatically recorded by collaborate. The Collaborate attendance grade is worth 75 points total out of 1550 points. Missing class will lower your attendance grade significantly, so you must attend class if you expect to pass this course. The instructor reserves the right to deny attendance points to students who do not attend the entire lecture or lab period.

Classroom Performance System (Top Hat):
All students are required to enroll in the Top Hat classroom performance system at the beginning of the semester, no later than February 1. You can use the app on your cell phone, tablet or computer or you can text your answers to the Top Hat phone number. We will use the Top Hat application to respond to groups of multiple choice questions designed to enhance the learning experience in the course. In addition to a 75 point attendance grade, students will receive a 75 point participation grade based on the Top Hat questions. Students will be allotted Top Hat points based on simply answering the question, regardless of whether the responses are correct. **Missing class will lower your Top Hat grade significantly, so you must attend class if you expect to pass this course.** The Top Hat grade will appear in a single column in the gradebook as an average, and the grades from Top Hat will be synced occasionally during the semester. At the end of the semester, the percentage of questions answered, either correctly or incorrectly, will be multiplied by 75 pts and divided by 100 in order to get your Top Hat Points out of the 75 points available.

Sapling Learning Homework System:
Students will be provided with a list of assigned homework problems in the textbook from Chapters 1-4, 6 & 8. There are two assignments for most, but not all of the chapters. The instructions for enrolling in the Sapling learning system and the assignments themselves are found in the folder called “Sapling Learning Assignments” under content on BlackBoard. Students will be graded on the completeness of the assignments. There will be no deduction for multiple attempts at problems. Students are expected to keep working all the homework problems until they have arrived at the correct answer before the time and date the assignment is due. **Do not hit “give up and view solution”!** Students are expected to begin working on the homework for a particular problem set as soon as we complete the lab the week before that homework is due. Due dates for homework assignments are listed in the chart below.

Late Homework Policy:
The Sapling Learning Homework system can accept late homework assignments. **However, for each day that the homework is late, 25% of the score will be deducted.** After 4 days, no credit will be given for late assignments. The system computes the score if any deductions need to be made for late homework.

Policy on Academic Dishonesty:
Students are expected to work independently on quizzes, exams and lab reports. See the ASU Student Handbook for definitions of cheating and plagiarism. Any student who is caught cheating or plagiarizing in this class will be subject to failure in the course and possible suspension from the University. Cheating and/or plagiarism will not be tolerated! Angelo State University expects its students to maintain complete honesty and integrity in their academic pursuits. Students are responsible for understanding the Academic Honor Code, which is contained in both print and web versions of the Student Handbook.
How to Act in this Online Class:

This class will be extremely interactive, with Dr. Maxwell adjusting the content and explanations based on interaction with the students in the course. Dr. Maxwell absolutely loves students to ask questions. Dr. Maxwell also loves it when students correct her mistakes. Everyone makes mistakes, but your job is to point out a mistake made by your instructor. That way it gets corrected immediately so students don't get confused. Students will not raise their hand to talk. If you see a mistake or think you see a mistake or you have a question, you can type it in the chat window. Or you can turn on your microphone to say it out loud so everyone can hear it and Dr. Maxwell can figure out what went wrong.

Make-up Exam Policy:

Students will only be allowed to take one make-up exam if there is an illness or emergency which is documented in writing. In order for a student to be eligible to take a make-up exam, the student must notify Dr. Maxwell before the exam is missed by telephone, voice mail or email. When a student returns to class after missing an exam, he or she must present a document such as a doctor’s note or funeral notice in order for Dr. Maxwell to give permission for a make-up exam. All make-up exams will be given on Friday, May 7 at 1:00 pm. Students will not be given a second chance for a make-up exam. Each student may take no more than one make-up exam for any reason whatsoever.

ASU COVID-19 Policy:

Although this class is entirely online, some of you may go onto the ASU campus to use computers, print items, etc. All students, faculty and staff are required to wear a mask on campus. Dr. Maxwell expects you to wear a mask while taking a quiz or exam if you are on the ASU campus. In addition, all students must enter their information into the Wellness screening app as many times as is required each day if they are on the ASU campus. Students who are alone in their dorm room are not required to wear a mask in order to take a quiz or an exam. Practice the proper safety procedures to minimize all exposure to the coronavirus.

Lab:

See the separate lab syllabus to access the plans and policies for the Chem 1106 course. The 1306 and 1106 courses are co-requisites and students will receive the same grade in both classes. The points earned in the lab will be added to the grades earned in the 1306 course. The cumulative total of the points will be used to determine your final letter grade, which will be the same in the lecture and lab courses. For your convenience, your lab grades will also be entered into your lecture gradebook and lab gradebook so that you can see the combined effect on your grade as the semester progresses. See the lecture syllabus for more information.
<table>
<thead>
<tr>
<th>Week</th>
<th>Dates: Class Meetings</th>
<th>Sections Covered</th>
<th>Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jan 26 &amp; 28</td>
<td>Sections 1.1 -1.2</td>
<td>Pure substances, mixtures, periodic table, metals, nonmetals, metalloids, Metric units and prefixes, metric to metric conversions Quiz 1 available from Sat, Jan 31 at 10 am until Sunday, Feb 1 at midnight Quiz 1 Topic – Lab 1 &amp; Secs 1.1 -1.2</td>
</tr>
<tr>
<td>2</td>
<td>Feb 2 &amp; 4</td>
<td>Sections 1.3 - 1.4 Sapling HW 1-1 due Feb 3 at 11:55 pm (13 pts)</td>
<td>Significant figures, scientific notation, percents, matter, density, temperature, energy, specific heat, physical states Quiz 2 available from Sat, Feb 6 at 10 am until Sunday, Feb 7 at midnight Quiz 2 Topic – Lab 2 &amp; Sec 1.4</td>
</tr>
<tr>
<td>3</td>
<td>Feb 9 &amp; 11</td>
<td>Section 1.5 – 1.6 Sapling HW 1-2 due Feb 10 at 11:55 pm (10 pts)</td>
<td>Precision vs. accuracy, dosage calculations, percent calculations in health science, physical and chemical changes, chemical reactions Quiz 3 available from Sat., Feb 13 at 10 am until Sunday, Feb 14 at midnight Quiz 3 Topic – Lab 3 &amp; Secs 1.5-1.6</td>
</tr>
<tr>
<td>4</td>
<td>Feb 16 &amp; 18</td>
<td>Chapter 2 Sapling HW 2 due Feb 17 at 11:55 pm (12 pts)</td>
<td>Atoms, subatomic particles, atomic number, mass number, isotopes, atomic mass Radioactivity, radioisotopes, nuclear equations, radioactive decay, radiations units and half-lives, medical applications for radioactivity Quiz 4 available from Sat., Feb 20 at 10 am until Sunday, Feb 21 at midnight Quiz 4 Topic – Lab 4 &amp; All of Ch 2</td>
</tr>
<tr>
<td>5</td>
<td>Feb 23 &amp; 25</td>
<td>Review for Exam I</td>
<td>Feb 25 (Thursday) – Exam I (Chs 1 &amp; 2) Administered during Class Time No Quiz this Weekend</td>
</tr>
<tr>
<td>6</td>
<td>March 2 &amp; 4</td>
<td>Sections 3.1 – 3.3 &amp; parts of 3.5</td>
<td>Electron arrangements, the octet rule, ion formation, ionic compounds, naming ionic compounds and writing the formula of ionic compounds with representative element ions, transition element ions and polyatomic ions, the mole, Avogadro’s number, atoms to moles conversions, molar masses of compounds No Quiz this Weekend</td>
</tr>
<tr>
<td>7</td>
<td>March 9 &amp; 11</td>
<td>Sections 3.4 – 3.7 Sapling HW 3-1 due March 10 at 11:55 pm (15 pts)</td>
<td>Covalent bonds, electron dot structures, Lewis structures, grams to moles conversions, grams to atoms or molecules conversions, molar masses of compounds, grams to molecules conversions, Molecular geometry, electronegativity, polarity of bonds and molecules Quiz 5 available from Sat., March 13 at 10 am until Sunday, March 14 at midnight Quiz 5 Topic – Lab 5 &amp; Sec 3.1-3.3 &amp; parts of Sec 3.5</td>
</tr>
<tr>
<td>Week</td>
<td>Dates: Class Meetings</td>
<td>Sections Covered</td>
<td>Topics</td>
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<tr>
<td>8</td>
<td>March 16 &amp; 18</td>
<td>Sections 4.1 - 4.3, Sapling HW 3-2 due March 17 at 11:55 pm (15 pts)</td>
<td>Alkanes, skeletal structures, functional groups, families of organic compounds, fatty acids Quiz 6 available from Sat., March 20 at 10 am until Sunday, March 21 at midnight Quiz 6 Topic – Lab 6 &amp; Secs 3.4-3.7</td>
</tr>
<tr>
<td>9</td>
<td>March 23 &amp; 25</td>
<td>Sections 4.4 – 4.5, Sapling HW 4-1 due March 24 at 11:55 pm (9 pts)</td>
<td>Nomenclature of alkanes, types of isomers in organic chemistry, unsaturated fatty acids, chiral molecules in biochemistry Quiz 7 available from Sat. March 27 at 10 am until Sunday, March 28 at midnight Quiz 7 Topic – Lab 7 &amp; Secs 4.1 - 4.3</td>
</tr>
<tr>
<td>10</td>
<td>March 30 &amp; April 1</td>
<td>Review for Exam 2, Sapling HW 4-2 due March 30 (Tuesday) at 11:55 pm (12 pts)</td>
<td>April 1 (Thursday) – Exam 2 (Chs 3 &amp; 4) Administered during Class Time No Quiz this Weekend</td>
</tr>
<tr>
<td>11</td>
<td>April 6 &amp; 8</td>
<td>Sections 6.1 - 6.4</td>
<td>Classes of carbohydrates, aldoses vs. ketoses, structures of common monosaccharides, stereochemistry of monosaccharides, cyclic forms of monosaccharides, oxidation and reduction of monosaccharides No Quiz this Weekend</td>
</tr>
<tr>
<td>12</td>
<td>April 13 &amp; 15</td>
<td>Sections 6.5 – 6.7, Sapling HW 6-1 due April 21 at 11:55 pm (12 pts)</td>
<td>Hydrolysis of disaccharides, naming glycosidic linkages, labeling anomeric, acetal and hemiacetal carbon atoms, structures of common disaccharides, reducing disaccharides, structures of storage and structural polysaccharides, ABO blood types Quiz 8 available from Sat., April 17 at 10 am until Sunday, April 18 at midnight Quiz 8 Topic – Lab 10 &amp; Secs 6.1-6.4</td>
</tr>
<tr>
<td>13</td>
<td>April 20 &amp; 22</td>
<td>Sections 8.1-8.4, Sapling HW 6-2 due April 21 at 11:55 pm (8 pts)</td>
<td>Solutions, colloids, suspensions, solubility vs. temperature for solids and gases, solubility vs. pressure for gases, strong electrolytes, weak electrolytes, nonelectrolytes, concentration, molarity, equivalents, milliequivalents per liter, percent concentration, ppm Quiz 9 available from Sat., April 24 at 10 am until Sunday, April 25 at midnight Quiz 9 Topic – Lab 11 &amp; Secs 6.5-6.7</td>
</tr>
<tr>
<td>14</td>
<td>April 27 &amp; 29</td>
<td>Sections 8.5 – 8.7, Sapling HW 8-1 due April 28 at 11:55 pm (9 pts)</td>
<td>Dilution, diffusion, osmosis, dialysis, passive diffusion, facilitated transport, active transport Quiz 10 available from Sat., May 1 at 10 am until Sunday, May 2 at midnight Quiz 10 Topic –Lab 14 &amp; Secs 8.1-8.4</td>
</tr>
<tr>
<td>Week</td>
<td>Dates: Class Meetings</td>
<td>Sections Covered</td>
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</table>
| 15   | May 4 & 6            | Review for Final Exam  
  Sapling HW 8-2 due May 5 at 11:55 pm (5 pts) |        |
| Final| Thursday, May 13     | Final Exam Administered 8:00 am – 10:00 am | Comprehensive Final Exam |

The final exam for Section D20 will be held on Thursday, May 13 at 8:00 – 10:00 am
<table>
<thead>
<tr>
<th>Week</th>
<th>Dates</th>
<th>Lab</th>
<th>Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jan 26</td>
<td>Lab 2: Properties, Units &amp; Conversions (25 pts)</td>
<td>Complete HW 1-1 after reading through Lab 1 and finishing Lab 2</td>
</tr>
<tr>
<td>2</td>
<td>Feb 2</td>
<td>Lab 3: Multistep Conversions, Dosage Calculations and Specific Heat (25 pts)</td>
<td>Complete HW 1-2 after Lab 3</td>
</tr>
<tr>
<td>3</td>
<td>Feb 9</td>
<td>Lab 4: Atoms, Isotopes &amp; Radiation (25 pts)</td>
<td>Complete HW 2 after Lab 4</td>
</tr>
<tr>
<td>4</td>
<td>Feb 16</td>
<td>Top Hat Review for Exam 1 (25 pts + Top Hat Credit)</td>
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</tr>
<tr>
<td>5</td>
<td>Feb 23</td>
<td>Lab 5: Arrangement of e-, Ionic Compounds &amp; Introduction to Moles &amp; Covalent Compounds (25 pts)</td>
<td>Complete HW 3-1 after Lab 5</td>
</tr>
<tr>
<td>6</td>
<td>March 2</td>
<td>Lab 6: Covalent Compounds and Moles (25 pts)</td>
<td>Complete HW 3-2 after Lab 6</td>
</tr>
<tr>
<td>7</td>
<td>March 9</td>
<td>Lab 7: Introduction to Organic Compounds and Families of Organic Compounds (25 pts)</td>
<td>Complete HW 4-1 after Lab 7</td>
</tr>
<tr>
<td>8</td>
<td>March 16</td>
<td>Lab 8: Naming Branched Alkanes and Isomers (25 pts)</td>
<td>Complete HW 4-2 after Lab 8</td>
</tr>
<tr>
<td>9</td>
<td>March 23</td>
<td>Top Hat Review for Exam 2 (25 pts + Top Hat Credit)</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>March 30</td>
<td>Lab 10: Intro to Carbohydrates: Monosaccharides (25 pts)</td>
<td>Complete HW 6-1 after Lab 10</td>
</tr>
<tr>
<td>11</td>
<td>April 6</td>
<td>Lab 11: Glycosidic Linkages, Disaccharides, and Polysaccharides (25 pts)</td>
<td>Complete HW 6-2 after Lab 11</td>
</tr>
<tr>
<td>12</td>
<td>April 13</td>
<td>Lab 14: Solutions, Solubility, Concentration (25 pts)</td>
<td>Complete HW 8-1 after Lab 14</td>
</tr>
<tr>
<td>13</td>
<td>April 20</td>
<td>Lab 15: Dilutions, Osmosis, Membrane Transport (25 pts)</td>
<td>Complete HW 8-2 after Lab 15</td>
</tr>
<tr>
<td>14</td>
<td>April 26</td>
<td>Top Hat Review for Final (25 pts + Top Hat Credit)</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>May 4</td>
<td>Bonus Review for Final</td>
<td></td>
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