CASPER COLLEGE COURSE SYLLABUS
Chem 1006: Basic Chemistry Lab

Semester/Year: Summer 2016 Section N1

Lecture Hours: 0  Lab Hours: --------  Credit Hours: 1

Instructor: Mitchel D. Millan, Ph.D.

Office: PS333, 307-2683017  Email: mmillan@caspercollege.edu
Office Hours: By appointment only

Course Description:
Elementary chemical laboratory practice demonstrating the applications of chemical theory. This laboratory includes experiments on density, changes of state, physical and chemical properties, percent composition of hydrates, elementary qualitative analysis, chemical reactions, and empirical formulas. Not recommended for students who plan to take CHEM 1025 or CHEM 1035. Concurrent enrollment or credit in CHEM 1005 is required. (Taken with CHEM 1005, equivalent to UW CHEM 1000.)

Statement of Prerequisites: must be taken concurrently with or subsequently to, Chem 1005

Goal: This lab seeks to: (i) demonstrate practical laboratory techniques and requisite calculations through the completion of several fundamental chemistry experiments (ii) instill proficiency in techniques including measurements of mass, length, temperature, and volume, (iii) prepare you for identification of several unknowns by various methods, and calculation of quantities such as density, specific heat, etc.

The Lab Kit!!!
Lab Experiments will be performed at home (or at a location convenient to you), using a chemistry Kit 4247, available from eScienceLabs. See the accompanying document OrderingScienceLabKitSu16.

Casper College and all affiliated with this on-line chemistry lab section will assume no responsibility for business conducted directly with eScience Labs, such as refund issues or missing kit contents. All issues must be directed to eSciences Labs.

Be sure about your plans and schedules concerning this lab course. Dropping the course does not guarantee return of the lab kit or refund of the cost. You must eScience Labs directly to find out if you qualify for a return.
MOODLE:
You will use Moodle to communicate with your instructor and with each other, and to receive files and documents that are not available in Google Drive (see below). You will also find a copy of this Syllabus, and the video “Lab Reports via Google Drive”. The shell is 16/Summer Chem 1006-N1 Basic Chemistry Lab. Note that this is different from the Moodle shell used for the corresponding lecture Chem 1005-N1.

Outcomes:
Upon successful completion of this course, students will:
1) be aware of basic safety and emergency procedures when performing chemistry experiments.
2) be trained in the proper procedures for performing experiments, and in the proper handling and use of chemical reagents, glassware, equipment, and balances.
3) understand the concepts of Basic Chemistry that the laboratory experiments are meant to illustrate and reinforce.

Initial Requirement: Go to the first window / box in Moodle. This Two-Step activity must be completed in Moodle by end of day (11:59 PM) of June 13.

- Watch the SAFETY VIDEO.
- Click on the activity labeled Lab Safety Agreement (LSA). Read each item and check off the appropriate boxes. Note that checking the last box / item in the LSA is considered to be equivalent to a signature and makes the LSA legally binding. No lab reports will be graded until the LSA is completed.

Methodology:
Ten LAB REPORTS (80 pts each):
- Each Report is worth a total of 80 points, in 2 parts:
  Pre-LaQ Question quiz in the lab Moodle shell for 10 points. Each PLQ must be completed no later than the Tuesday or Friday due date as given in the Schedule at the bottom of this Syllabus.
  A Lab Report (to be completed in Google Drive) for 70 points. Each Report must be completed no later than the Wednesday or Saturday due date as given in the Schedule.

- It is extremely difficult to apportion all the scores in a Report into 70 equal points. Your instructor will simply assign a reasonable number of points for notes/observations/results/questions. Your percentage out of 70 will be taken as your report score. For example, if the maximum points for a report sum up to 116 points, a raw score of, e.g. 102 points equals a report score of (102 / 116 = 87.9%; 70 x 87.9%) = 61.5 points out of 70.

- You will actually be performing 11 experiments. To give you a little leeway, the lowest scoring PLQ and Report will be dropped, and only the ten highest scoring PLQs and Reports will be used to find your final grade. Any missed PLQs or
Reports beyond the single dropped assessment will be given 0 points and included in grade calculations.

- Since you are performing these experiments off-campus, there will be no credit for lab performance. You will be graded solely on your PLQs and Lab Reports. Perform your experiments and write your reports well. If you are unsure about anything, contact your instructor before you submit the report, not after the fact.

- **VERY IMPORTANT!!! SELFIE ALERT!** To ensure your safety when performing the lab experiments, you MUST have a responsible adult with you as a lab partner. Your partner does NOT need to a classmate in this lab course, and does NOT need to do the actual experiment with you (although it might be fun for him / her), but this adult must be in close proximity to help out as the need arises. For example, he / she might be there to blow out a flame, or hold a piece equipment still for you when you can't. This means your lab partner cannot be your toddler or young child, your dog or your cat, or your imaginary childhood friend. To enforce this requirement, you must post a SELFIE image showing you and your lab partner in each lab report.

- **VERY IMPORTANT TOO!!!** Your instructor will be using Google Drive (you MUST use your official Casper College gmail account) for all lab reports. An instructional video titled “Lab Reports via Google Drive” can be viewed in the lab Moodle shell. Watch this video several times to make sure you know how to complete reports for this lab course. Using your CASPER COLLEGE email account (you MUST have one!) a Google Drive folder will be shared with you that contains all the templates for the lab reports you will be writing. Again, all the details will be discussed in the video “Lab Reports via Google Drive”.

- To make sure you are comfortable with Google Drive, you will complete a Sample Report using the procedure you will be following for the actual 11 experiments. Make sure you do this, so you can start to get used to the “quirks” of using Google Drive. To add some incentive, an extra 10 points will also be added for the Sample Report over and above the 1000 point maximum for this course.

- In all reports, always show a measurement or calculated value to the correct number of significant figures and with the proper units. For example, a three significant figure mass would be, for example, 2.58 g (grams). Only partial credit is given for incorrect significant figures (e.g. 2.5 g) or missing units (2.58 __). Very large emphasis is placed on the significant figures in your measurements, calculations and answers. Be absolutely sure that you know how to handle significant figures in measurements and calculations!!!

- You must show all calculations, even if this is not explicitly asked for in the Lab Report Template. If only answers are given, you will be given only partial credit.
• Absolutely NO LATE PRE-LAB QUESTIONS will be allowed after the Tuesday or Friday due dates for any reason. That is, missed PLQs earn zero points, with no partial credit possible.

• Reports must be completed by end of day (11:59 PM) of each Wednesday or Saturday due date. Obviously, you have to perform the actual experiment on or before that date. It is recommended that you do the labs a day or more before the due date. You might not finish some experiments if you start on the day itself that the report is due. Each report in Google Drive will contain a date and time stamp, which will indicate whether the report was completed on time. Full details will be available in the "Lab Reports via Google Drive" video in the lab Moodle page.

• Although labs have Wednesday or Saturday due dates, reports completed no later than end of day TWO DAYS BEFORE the due date (Monday or Thursday) are allowed one revision. You MUST EMAIL your instructor at mmillan@caspercollege.edu immediately after completion, to say that you have an EARLY REPORT. If no email is received by Monday or Thursday, your report will only be checked after the due date itself, and you lose the chance to make revisions, even if you actually completed the report early.

• Each EARLY report will be graded no later than a day after your submission (Tuesday or Friday), and you have until the end of day of the Wednesday or Saturday due date to make corrections, allowing you to get back HALF the points lost. Reports completed on or after the due dates (or without an email notification or an early report) are not eligible for revisions of any kind.

• If you are unable to complete your Report as scheduled, you must email your instructor on or before the Wednesday or Saturday due date to arrange for an extension. Otherwise, your report will be penalized 5 points per day late, not including holidays or weekends. Penalties will continue to accrue until the Report is submitted, until you have run out of points, or until you have contacted your instructor for an extension. Late contact (emails after the Wednesday or Saturday due date) will stop penalties, but not recover lost points.

• The corrected lab reports will be available to you immediately since you are sharing the report in Google Drive with your instructor. Full details are available in the “Lab Reports via Google Drive” video in the lab Moodle page.

LAB MIDTERM (100 pts):
An on-line Lab Midterm will be given in the lab Moodle shell between July 7 and 9, and will involve material from the FIRST SIX lab experiments.
LAB FINAL (100 pts):
An on-line Lab Final will be given in the lab Moodle shell between July 28 and 29, and will involve material from the LAST FIVE lab experiments (but not the first six labs).

<table>
<thead>
<tr>
<th>GRADE DISTRIBUTION</th>
<th>Max. Scores:</th>
<th>GRADING SCALE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Lab Questions in Moodle</td>
<td>100 pts</td>
<td>A: 900-1000 pts</td>
</tr>
<tr>
<td>Lab Reports in Google Docs</td>
<td>700 pts</td>
<td>B: 800-899 pts</td>
</tr>
<tr>
<td>Lab Midterm Test in Moodle</td>
<td>100 pts</td>
<td>C: 700-799 pts</td>
</tr>
<tr>
<td>Lab Final Test in Moodle</td>
<td>100 pts</td>
<td>D: 600-699 pts</td>
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</tbody>
</table>

Class Policies / Last Date to Change to Audit Status or to Withdraw with a W Grade:
- Since this is an off-campus lab section, you are solely responsible for performing each experiment in a safe manner. Casper College and all affiliated with this chemistry lab section will assume no responsibility for injury / accidents that occur during the performance of each experiment. Remember, you MUST perform the experiments in the presence of a responsible adult (lab partner).
- Use appropriate safety equipment (e.g. safety glasses / goggles, latex gloves. Lab coat or kitchen apron recommended), follow safety procedures (safe handling of glass, flame, chemicals, etc.), and observe proper waste disposal. Dispose of waste chemicals (if any) in the manner prescribed in the experiment.
- The last day for withdrawal (grade of W) without instructor permission is July 6.

Student Rights and Responsibilities: Please refer to the Casper College Student Conduct and Judicial Code for information concerning your rights and responsibilities as a Casper College Student.

Chain of Command: If you have any problems with this class, you should first contact the
instructor to attempt to solve the problem. If you are not satisfied with the solution offered by the instructor, you should then take the matter through the appropriate chain of command starting with the Department Head (Dr. Eric Mechaleke), the Dean of the School of Science (Dr. Grant Wilson), and lastly the Vice President for Academic Affairs (Dr. Shawn Powell).

**Academic Dishonesty** - Cheating & Plagiarism: Casper College demands intellectual honesty. Proven plagiarism or any form of dishonesty associated with the academic process can result in the offender failing the course in which the offense was committed or expulsion from school. See the Casper College Student Code of Conduct for more information on this topic.

**Official Means of Communication:** Casper College faculty and staff will employ the student's assigned Casper College email account as a primary method of communication. Students are responsible to check their account regularly.

**ADA Accommodations Policy:** If you need academic accommodations because of a disability, please inform me as soon as possible. To request academic accommodations, students must first consult with the college's Disability Services Counselor located in the Gateway Building, Room 344, (307) 268-2557, bheuer@caspercollege.edu. The Disability Services Counselor is responsible for reviewing documentation provided by students requesting accommodations, determining eligibility for accommodations, and helping students request and use appropriate accommodations.

Schedule:

<table>
<thead>
<tr>
<th>Pre-Lab Questions Due:</th>
<th>Lab Report Due:</th>
<th>Lab Date</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 13</td>
<td>13</td>
<td>June 13</td>
<td>Lab Safety Agreement, LSA</td>
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<tr>
<td>June 14</td>
<td>14</td>
<td>15</td>
<td>Sample Report</td>
</tr>
<tr>
<td>17</td>
<td>18</td>
<td>1</td>
<td>Data Analysis and Graphing</td>
</tr>
<tr>
<td>21</td>
<td>22</td>
<td>2</td>
<td>Types of Matter</td>
</tr>
<tr>
<td>24</td>
<td>25</td>
<td>3</td>
<td>Examination of Physical and Chemical Properties</td>
</tr>
<tr>
<td>28</td>
<td>29</td>
<td>4</td>
<td>Measuring Heats of Reaction</td>
</tr>
<tr>
<td>July 1</td>
<td>July 2</td>
<td>5</td>
<td>Discovering the Five Types of Chemical Reactions</td>
</tr>
<tr>
<td>12</td>
<td>13</td>
<td>6</td>
<td>Evaluating Precipitation Reactions</td>
</tr>
<tr>
<td>15</td>
<td>16</td>
<td>7</td>
<td>Lab Midterm: July 7-9</td>
</tr>
<tr>
<td>19</td>
<td>20</td>
<td>8</td>
<td>Oxidation-Reduction</td>
</tr>
<tr>
<td>22</td>
<td>23</td>
<td>9</td>
<td>Stoichiometric Calculations: Reactants and Products</td>
</tr>
<tr>
<td>26</td>
<td>27</td>
<td>10</td>
<td>Exploring Solubility</td>
</tr>
<tr>
<td>26</td>
<td>27</td>
<td>11</td>
<td>Electron Configuration</td>
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<td></td>
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<td></td>
<td>Molecular Geometry: The VSEPR Model</td>
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<td>Lab Final: July 28-29</td>
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