Semester/Year: Spring 2015 **Section 01,02**

Lecture Hours: **3**  
Lab Hours: **0**  
Credit Hours: **3**

Class Time:  
Days: MWF  
Room: PS317

Problems Class: 11-11:50 AM, T, PS315

Instructor’s Name: Mitchel D. Millan, Ph.D.

Instructor's Contact Information:  
Office Phone: 307-2683017  
Email: mmillan@caspercollege.edu

Office Hours: MWF 11AM-12PM; T 1-3 PM

Course Description: The second semester of a general course designed to meet the requirements of preprofessional, engineering, physical or biological science, and liberal arts majors. Topics covered are: Gas calculations, intermolecular forces, properties of solutions, thermodynamics, kinetics and mechanisms of chemical reactions, equilibrium situations, complex equilibria, electrochemistry, and, nuclear chemistry. Students needing laboratory credit should enroll concurrently in CHEM 1038.

Statement of Prerequisites: A grade of C or better in both CHEM 1025 and MATH 1400 or the permission of the instructor.

Goal: This class will introduce students to the principles of chemistry. Skills involved will include (but will not be limited to) critical thinking, and ability to analyze qualitative, numerical and chemical problems.

Outcomes:  
Proficiency in metric system conversions, chemical and solution stoichiometry, thermochemistry, atomic structure, electronic configurations, periodicity, covalent and ionic bonding, states of matter, composition of solutions, nomenclature and prediction of reaction products.

Methodology: Lectures will be delivered using Powerpoint. To help students prepare for class, the Powerpoint slides will be posted as pdf files in the Moodle class shell. Moodle will also be used to deliver announcements and assignments (for submission on paper) and administer Chapter Quizzes (see below).

Evaluation Criteria:

Lectures will be delivered using Powerpoint. To help students prepare for class, the Powerpoint slides will be posted as pdf files in the Moodle class shell. Moodle will also be used to deliver announcements. Chapter Quizzes and Homework will be administered using the Mastering Chemistry system (see below).

- Four REGULAR TESTS (600 pts total). These will involve essay / explain questions, plus calculation problems. The essay questions may themselves involve some math. The nature of the course necessitates that each succeeding Test be somewhat cumulative. However, each Test will focus **mainly**
on the coverage in the Schedule below. Make-up Tests may be given: (i) at your instructor’s discretion, and (ii) when reasonable and unavoidable circumstances are involved, and (iii) when notice is given to your instructor. Advanced notice that you can’t take an Test as scheduled is appreciated. Otherwise, you must contact your instructor by phone or email on the same day of the missed Test. A coach’s/doctor’s/police certificate will be required as appropriate. Under all other circumstances, you get zero for the test. The three highest Tests will be credited, after dropping the lowest score. Tests will be given as scheduled below.

- CHAPTER QUIZZES (adjusted to 150 pts total). These are quizzes administered at the end of each chapter of the textbook, using Mastering Chemistry.

Go to http://masteringchemistry.com/ and click on Students in the Register box.

In Step 1: Do you have an access code? click No, I need to purchase access online now.

In Step 2: Tell us which book you’re using, click on Brown/LeMay/ Bursten/Murphy, Chemistry: The Central Science 12 ed. This should have a black and grey cover with red text.

In Step 3: eText options, click No, thanks. (unless you want access to the eText rather than a paper textbook. Access to the eText MIGHT lapse when the semester is over) then Continue.

Click I Accept for Private Policy and License Agreement.

Please be aware of the cost associated with Mastering Chemistry, which is currently $56.30.

Under Do You have a Pearson Education account? you should probably click Not Sure if you’ve never dealt with Pearson before.

Continue providing all other information that the system will require.

The Course ID for this class is MDMILLAN1035S15. The Mastering Chemistry system is a REQUIREMENT for this course.

- HOMEWORK (adjusted to 100 pts total). HW will also be administered through the Mastering Chemistry system described above. HW are open within the duration of each lecture chapter. Each HW is worth 10 pts. HW will more or less than 10 questions will have a score that will be converted to an equivalent of 10 pts. Unlimited attempts will be allowed per HW, within the time period allotted.

- Comprehensive FINAL TEST (150 pts). Exemptions will be allowed for students who score a B or better before the Final and have taken all four Regular Tests. Missed tests will disqualify students from exemption from the Final, no matter what their pre-final grade is.

<table>
<thead>
<tr>
<th>GRADE DISTRIBUTION</th>
<th>Your Scores:</th>
<th>GRADING SCALE</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 Regular Tests: 50%</td>
<td>500 pts</td>
<td>A: 900-1000 pts</td>
</tr>
<tr>
<td>Final Test: 25%</td>
<td>250 pts</td>
<td>B: 800-899 pts</td>
</tr>
<tr>
<td>Chapter Quizzes: 15%</td>
<td>150 pts</td>
<td>C: 700-799 pts</td>
</tr>
<tr>
<td>Homework: 10%</td>
<td>100 pts</td>
<td>D: 600-699 pts</td>
</tr>
<tr>
<td>Attendance</td>
<td>10 pts</td>
<td>-----------</td>
</tr>
</tbody>
</table>

Required Text, Readings, and Materials:

Class Policies: Last Date to Change to Audit Status or to Withdraw with a W Grade:

- By registering for, and staying in, this class, you agree to (i) abide by the policies, and (ii) fulfil all the requirements, described in this syllabus. Your instructor reserves the right to make revisions and modifications to this syllabus as needed, subject to sufficient notice to the class of such changes. You
are responsible for all announcements (verbal and posted on Moodle), homework exercises, quizzes, and Tests, as well as changes in the schedule, whether or not you are in class. Absence neither excuses you from responsibility, nor entitles you to special opportunities or extra notification.

- The term ‘Basic’ in Basic Chemistry is used to describe this course. It is assumed that as college students, you have the ‘basic’ science, math and English skills from high school. You may not have taken chemistry at all, but you should be able to do (or are currently taking) simple algebra and word-problem calculations. Your instructor will assume that you can READ. This is a science class that will exercise your science, math, and English abilities through a variety of quizzes, exercises, recitations (you will be called upon!) and Tests. If you feel your skills are not well developed, you should get help as soon, and as often as you can. Ignoring your deficiencies will not make Basic Chemistry any easier.

- Review sessions will not be held during class time. Your instructor will post (in Moodle) “Need-To-Know” Sheets that outline what to expect in each Test and the Finals. Also, your instructor has office hours, an email address, and a phone- use them. Your Tests will be returned and discussed, typically within two meetings after the test. You may discuss your test results and grade with your instructor during office hours.

- Attendance will be checked using a sign-up sheet passed around at the beginning of class. Come to class on time. Coming late can be disruptive, and is disrespectful to your classmates and instructor. Your instructor reserves the right to deny attendance sign-up to latecomers.

- Your instructor reserves the right to initiate an RA after three consecutive no-shows and an FIW after two continuous weeks of absence (six meetings).

- Turn your cell phones off prior to class, unless you are a firefighter, EMT, the parent of a child for whom you must be available, or waiting for an emergency call. If so, keep your phones on vibrate and step outside the classroom to take the call. You must inform your instructor on a per-meeting basis about your potential incoming call. Text Messaging during class is extremely rude, and will not be allowed at any time. Your instructor reserves the right to take appropriate action if this policy is flagrantly violated.

- Laptops are allowed in class if you use it to take notes. None-class (i.e. not of this particular class) material viewed or written on your laptop, whether notes, homework, or Internet is not allowed. Your instructor reserves the right to check that your laptop is being used appropriately during class.

- You will be called upon to participate in class. Pay attention. Stay awake.

*The last day for withdrawal (a grade of W) without instructor permission is April 16.*

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/Program Director (Dr. Eric Mechalke), the interim Dean of the School of Science (Dr. Grant Wilson), and lastly the Vice President for Academic Affairs (Dr. Tim Wright).

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.

ADA Accommodations Policy: It is the policy of Casper College to provide appropriate accommodations to any student with a documented disability. If you have a need for accommodation in this course, please make an appointment with our Accommodative Services Counselor at 268-2557.

Schedule:
<table>
<thead>
<tr>
<th>Date</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan 21,23,26,28</td>
<td>Discussion of Syllabus</td>
</tr>
<tr>
<td></td>
<td>Ch 10 (Gases)</td>
</tr>
<tr>
<td>30, Feb 2,4</td>
<td>Ch 11 (…Intermolecular Forces)</td>
</tr>
<tr>
<td>6,9,11,13</td>
<td>Ch 13 (Properties of Solutions)</td>
</tr>
<tr>
<td>16</td>
<td>President’s Day: No Meeting</td>
</tr>
<tr>
<td>18</td>
<td>Test 1 (Chs 10,11,13)</td>
</tr>
<tr>
<td>20,23,25,27</td>
<td>Ch 14 (Chemical Kinetics)</td>
</tr>
<tr>
<td>Mar 2,4,6</td>
<td>Ch 15 (Chemical Equilibrium)</td>
</tr>
<tr>
<td>9</td>
<td>Test 2 (Chs 14,15)</td>
</tr>
<tr>
<td>11,13,23</td>
<td>Ch 16 (Acid-Base Equilibria)</td>
</tr>
<tr>
<td>16-20</td>
<td>Spring Break: No Meetings</td>
</tr>
<tr>
<td>25,27,30</td>
<td>Ch 17 (… Aqueous Equilibria)</td>
</tr>
<tr>
<td>Apr 1,6,8,10</td>
<td>Ch 19 (Chemical Thermodynamics)</td>
</tr>
<tr>
<td>3</td>
<td>Spring Holiday: No Meeting</td>
</tr>
<tr>
<td>6-17</td>
<td>Advising Week</td>
</tr>
<tr>
<td>13</td>
<td>Test 3 (Chs 16,17,19)</td>
</tr>
<tr>
<td>15,17,20,22,24</td>
<td>Ch 20 (Electrochemistry)</td>
</tr>
<tr>
<td>16</td>
<td>Deadline for Withdrawal without Instructor Permission</td>
</tr>
<tr>
<td>27,29, May 1, 4</td>
<td>Ch 21 (Nuclear Chemistry)</td>
</tr>
<tr>
<td>6</td>
<td>Test 4 (Chs 20,21)</td>
</tr>
<tr>
<td>8</td>
<td>Discuss Test 4 / Pre-Final Consultation</td>
</tr>
<tr>
<td>11-14</td>
<td>Finals Week, Schedule TBA</td>
</tr>
</tbody>
</table>

* All Homework will be open in Mastering Chemistry for about a week during the duration of the lecture chapters. All Chapter Quizzes will be open in Mastering Chemistry for 72 hours during weekdays only.