CHEM 1311.02 – General Chemistry I

Fall 2019

Instructor: Dr. K. Christopher Smith, SCIE 3.120, telephone: 665-2063, e-mail: kenneth.smith@utrgv.edu

Class Time: Mondays and Wednesdays, 11:00am – 12:15pm, EHABW 1.406

Office hours: T, Th 11:00am – 12:00pm, SCIE 3.120
Office hours can also be scheduled by appointment (send e-mail)

Course Materials: a) SaplingPlus for Interactive General Chemistry & iClicker Reef Polling. Six Month option at $55.99-$67.25, or 12 Month option at $111.99-$134.25 (required).
b) Calculator (required).

CHEM 1311 Course Description:

“Fundamentals of atomic structure, electronic structure and periodic table, nomenclature, the stoichiometry reactions, gas laws, thermochemistry, chemical bonding, and structure and geometry of molecules. Prerequisite: CHEM 1300 or one year of high school chemistry.”

Learning Outcomes for CHEM 1311

The overall goal in terms of learning outcomes is to help you to have meaningful learning of the topics we will cover in this course. This meaningful learning involves two main types of learning: a) learning to use formulas, equations, and procedures to carry out calculations and similar types of operations, and b) learning ideas and concepts in order to be able to explain and apply them in possibly new and different situations.

The end of each chapter in the text has a section with a review checklist, in which important terms, key equations, a summary of facts and concepts, and operational skills are outlined. The key equations and operational skills are important for the type of learning outlined in part a) above, while the important terms and summary of facts and concepts are important for the type of learning in part b) above. Use these resources!

Learning Objectives for Core Curriculum Requirements

In addition to these general chemistry content learning outcomes above, there are several specific learning objectives for this course. These are to develop critical thinking skills, communication skills, empirical and quantitative skills, and teamwork skills.
Where can you go for help with CHEM 1311?

a) **Professor**: I have office hours available, or you can schedule an appointment or e-mail me if you need help.

b) **The UTRGV Learning Center** (https://www.utrgv.edu/tutoring/) advertises free tutoring available for a number of subject areas, including chemistry.

c) **Each other**: there are many other students enrolled in CHEM 1311, and it is a great idea to use one another as resources. Help each other, support each other, and challenge each other!

**Tips for success in CHEM 1311**

a) **Attend lectures**: Lecture attendance is expected. Attending lectures, paying attention, and participating will aid your success in general chemistry. The more active your role is in your learning, the greater your chances for your success. In addition, minimizing distractions during lecture (such as cell phones ringing, pagers beeping, etc.) encourages a more productive learning environment.

b) **Review your notes after lecture**: Go over your notes after each lecture, and pay special attention to ideas or concepts which may not have been clear to you during the lecture.

c) **Get an overview of the lecture material before coming to lecture**: Once you attend the lectures, and you review your notes after each lecture, you will have a good idea of the lecture material which will come in the following lectures. Take a look at the lecture material to get an overview of the concepts and ideas which will be coming.

d) **Do the assigned homework**: Completing the assigned homework helps you to gain experience with a greater variety of problems and exercises, and also allows you to identify possible areas of difficulty. Also, be aware that listening to an idea being explained or watching a problem being solved is not the same as applying the idea yourself or solving the problem yourself.

e) **Form study groups**: Forming study groups is a great way to learn the material and to help one another learn the material.

f) **Ask questions**: Don’t be afraid to ask questions about concepts or ideas that you might have difficulty with. You can ask in class, because there is always a good chance that someone else has the same question, or you get help with your questions out of class.

g) **Keep up with the course material**: It is very difficult to “catch up” with the material in chemistry once you get behind, so try your best to keep up!
Tentative Lecture and Exam Schedule:

<table>
<thead>
<tr>
<th>Date</th>
<th>Week</th>
<th>Lecture</th>
<th>Lecture Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>8/26</td>
<td>1</td>
<td>1</td>
<td>Introduction to the course; Chapter 1: Science and Measurement</td>
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<tr>
<td>8/28</td>
<td>1</td>
<td>2</td>
<td>Chapter 1 continued</td>
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<tr>
<td>9/2</td>
<td>2</td>
<td>---</td>
<td>Labor Day Holiday. No Classes</td>
</tr>
<tr>
<td>9/4</td>
<td>2</td>
<td>3</td>
<td>Chapter 2: Atoms and the Periodic Table</td>
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<td>9/9</td>
<td>3</td>
<td>4</td>
<td>Chapter 2 continued</td>
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<tr>
<td>9/11</td>
<td>3</td>
<td>5</td>
<td>Chapter 3: Compounds and the Mole</td>
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<td>9/16</td>
<td>4</td>
<td>6</td>
<td>Chapter 3 continued</td>
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<tr>
<td>9/18</td>
<td>4</td>
<td>---</td>
<td><strong>Exam #1: Chapters 1, 2, &amp; 3a</strong></td>
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<tr>
<td>9/23</td>
<td>5</td>
<td>7</td>
<td>Chapter 4: Chemical Reactions and Aqueous Solutions</td>
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<td>9/25</td>
<td>5</td>
<td>8</td>
<td>Chapter 4 continued</td>
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<td>9/30</td>
<td>6</td>
<td>9</td>
<td>Chapter 5: Stoichiometry</td>
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<td>10/2</td>
<td>6</td>
<td>10</td>
<td>Chapter 5 continued</td>
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<td>10/7</td>
<td>7</td>
<td>11</td>
<td>Chapter 5 continued</td>
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<td>10/9</td>
<td>7</td>
<td>12</td>
<td>Chapter 7: Gases</td>
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<td>10/14</td>
<td>8</td>
<td>13</td>
<td>Chapter 7 continued</td>
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<tr>
<td>10/16</td>
<td>8</td>
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<td><strong>Exam #2: Chapters 3b, 4, &amp; 5</strong></td>
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<tr>
<td>10/21</td>
<td>9</td>
<td>14</td>
<td>Chapter 7 continued</td>
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<td>10/23</td>
<td>9</td>
<td>15</td>
<td>Chapter 6: Thermochemistry</td>
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<td>10/28</td>
<td>10</td>
<td>16</td>
<td>Chapter 6 continued</td>
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<td>10/30</td>
<td>10</td>
<td>17</td>
<td>Chapter 8: The Quantum Model of the Atom</td>
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<td>11/4</td>
<td>11</td>
<td>18</td>
<td>Chapter 8 continued</td>
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<td>11/6</td>
<td>11</td>
<td>19</td>
<td>Chapter 9: Periodicity and Ionic Bonding</td>
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<td>11/11</td>
<td>12</td>
<td>20</td>
<td>Chapter 9 continued</td>
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<td>11/13</td>
<td>12</td>
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<td><strong>Exam #3: Chapters 7, 6, &amp; 8</strong></td>
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<td>11/18</td>
<td>13</td>
<td>21</td>
<td>Chapter 10: Covalent Bonding</td>
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<td>11/20</td>
<td>13</td>
<td>22</td>
<td>Chapter 10 continued</td>
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<tr>
<td>11/25</td>
<td>14</td>
<td>23</td>
<td>Chapter 11: Molecular Shape and Bonding Theories</td>
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Grading

Grades are based on the following scale:
100% - 90% = A; 89% - 80% = B; 79% - 70% = C; 69% - 60% = D; <60% = F

The distribution of the course grade is as follows (the lowest exam grade excluding the final exam will be dropped):
- Final exam 20%
- Exam #1 20%
- Exam #2 20%
- Exam #3 20%
- Exam #4 20%
- Homework 10%
- PLTL Study Sessions 10%

Exams

There will be four exams during the semester, in addition to the final exam at the end of the semester. The semester exams will be held during the regular meeting time of the course, and in the regular meeting place of the course, as indicated at the start of this syllabus.

There will be no make-up exams. Any unexcused absence from an exam will result in a score of zero for the exam. The only excusable reasons for missing an exam are as follows: you have a major medical illness requiring immediate treatment, there is a death of an immediate family member, you must participate in a required university activity, or you are observing a religious holy day. Documentation is required for all four of these cases. In the cases of your illness or a family member’s death, documentation is required when you return to campus. In the case of a required university activity or a religious holy day, documentation is required at least one week prior to the activity.

Final Exam

The final exam will be held on Monday December 9th from 10:15am-12:00pm in the regular meeting place of the course, as indicated at the start of this syllabus. There will be no make-up final exam. It is the Department of Chemistry's policy that the comprehensive final exam for the course is mandatory. There are no exemptions from the final exam, and the final exam grade will not be dropped.
**Homework**

Homework will be assigned and graded through the Sapling Learning homework system. These questions will be assigned to help you think about the concepts and ideas in the course, and to help you practice the types of calculations and problem-solving situations involved in the course. The Interactive General Chemistry online textbook is also available through the Sapling website.

In order to gain access to the Sapling Homework, and to the Interactive General Chemistry online textbook, please go to the following website: https://macmillan.force.com/macmillanlearning/s/article/Sapling-Learning-Registering-for-courses

Once you are at the website, follow the instructions to create an account, and to register for our course.

**Peer Led Team Learning (PLTL) Study Sessions**

Peer Led Team Learning (PLTL) Study sessions are designed to give you the opportunity to practice questions and problems in a small group environment with a student leader who has done well in the course in the recent past. Attendance at study sessions is mandatory; if you miss five or more study sessions, you will not receive any of the course grade allocated to the study sessions.

**Important Dates to Remember**

The UTRGV academic calendar can be found at https://my.utrgv.edu/home prior to login. Important dates for Fall 2019 include:

- Aug. 26 (Mon.) Fall classes begin
- Aug. 29 (Thurs.) Last day to add a class or register for Fall classes
- Aug. 30 (Fri.) Last day to withdraw (drop all classes) and receive an 80% refund
- Sep. 2 (Mon.) Labor Day Holiday. No classes.
- Sep. 9 (Mon.) Last day to withdraw (drop all classes) and receive a 70% refund
- Sep. 11 (Wed.) Census Day (last day to drop without it appearing on the transcript)
- Sep. 16 (Mon.) Last day to withdraw (drop all classes) and receive a 50% refund
- Sep. 23 (Mon.) Last day to withdraw (drop all classes) and receive a 25% refund
- Nov. 13 (Wed.) Last day to drop a class (grade of DR) or withdraw (grade of W)
- Nov. 28-29 (Thurs.-Fri.) Thanksgiving Holiday. No classes.
- Dec. 5 (Thurs.) Study Day. No classes.
- Dec. 6-12 (Fri.-Thurs.) Final Exams

There are several other important dates on the webpage; you are encouraged to look.

**Students with Disabilities**

Students with a documented disability (physical, psychological, learning, or other disability which affects academic performance) who would like to receive academic
accommodations should contact Student Accessibility Services (SAS) as soon as possible to schedule an appointment to initiate services. Accommodations can be arranged through SAS at any time, but are not retroactive. Students who experience a broken bone, severe injury, or undergo surgery during the semester are eligible for temporary services.

**Pregnancy, Pregnancy-related, and Parenting Accommodations**

Title IX of the Education Amendments of 1972 prohibits sex discrimination, which includes discrimination based on pregnancy, marital status, or parental status. Students seeking accommodations related to pregnancy, pregnancy-related condition, or parenting (reasonably immediate postpartum period) are encouraged to contact Student Accessibility Services for additional information and to request accommodations.

**Student Accessibility Services:**

**Brownsville Campus:** Student Accessibility Services is located in 1.107 in the Music and Learning Center building (BMSLC) and can be contacted by phone at (956) 882-7374 or via email at ability@utrgv.edu.

**Edinburg Campus:** Student Accessibility Services is located in 108 University Center (EUCTR) and can be contacted by phone at (956) 665-7005 or via email at ability@utrgv.edu.

**Mandatory Course Evaluation Period**

Students are required to complete an ONLINE evaluation of this course, accessed through your UTRGV account (http://my.utrgv.edu); you will be contacted through email with further instructions. Students who complete their evaluations will have priority access to their grades. Online evaluations will be available on or about:

- **Module 1** October 2\textsuperscript{nd} – 8\textsuperscript{th}
- **Module 2** November 27\textsuperscript{th} – December 3\textsuperscript{rd}
- **Full Fall Semester** November 14\textsuperscript{th} – December 4\textsuperscript{th}

**Attendance**

Students are expected to attend all scheduled classes and may be dropped from the course for excessive absences. UTRGV’s attendance policy excuses students from attending class if they are participating in officially sponsored university activities, such as athletics; for observance of religious holy days; or for military service. Students should contact the instructor in advance of the excused absence and arrange to make up missed work or examinations.
Scholastic Dishonesty

As members of a community dedicated to Honesty, Integrity and Respect, students are reminded that those who engage in scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and expulsion from the University. Scholastic dishonesty includes but is not limited to: cheating, plagiarism (including self-plagiarism), and collusion; submission for credit of any work or materials that are attributable in whole or in part to another person; taking an examination for another person; any act designed to give unfair advantage to a student; or the attempt to commit such acts. Since scholastic dishonesty harms the individual, all students and the integrity of the University, policies on scholastic dishonesty will be strictly enforced (Board of Regents Rules and Regulations and UTRGV Academic Integrity Guidelines). All scholastic dishonesty incidents will be reported to Student Rights and Responsibilities.

Sexual Misconduct and Mandatory Reporting

In accordance with UT System regulations, your instructor is a “Responsible Employee” for reporting purposes under Title IX regulations and so must report to the Office of Institutional Equity & Diversity (oie@utrgv.edu) any instance, occurring during a student’s time in college, of sexual misconduct, which includes sexual assault, stalking, dating violence, domestic violence, and sexual harassment, about which she/he becomes aware during this course through writing, discussion, or personal disclosure. More information can be found at www.utrgv.edu/equity, including confidential resources available on campus. The faculty and staff of UTRGV actively strive to provide a learning, working, and living environment that promotes personal integrity, civility, and mutual respect that is free from sexual misconduct, discrimination, and all forms of violence. If students, faculty, or staff would like confidential assistance, or have questions, they can contact OVAVP (Office for Victim Advocacy & Violence Prevention) at 665-8287, 882-8282, or OVAVP@utrgv.edu.

Course Drops

According to UTRGV policy, students may drop any class without penalty earning a grade of DR until the official drop date. Following that date, students must be assigned a letter grade and can no longer drop the class. Students considering dropping the class should be aware of the “3-peat rule” and the “6-drop” rule so they can recognize how dropped classes may affect their academic success. The 6-drop rule refers to Texas law that dictates that undergraduate students may not drop more than six courses during their undergraduate career. Courses dropped at other Texas public higher education institutions will count toward the six-course drop limit. The 3-peat rule refers to additional fees charged to students who take the same class for the third time.
Student Services

Students who demonstrate financial need have a variety of options when it comes to paying for college costs, such as scholarships, grants, loans and work-study. Students should visit the Students Services Center (U Central) for additional information. U Central is located in BMAIN 1.100 (Brownsville) or ESSBL 1.145 (Edinburg) or can be reached by email (ucentral@utrgv.edu) or telephone: (888) 882-4026. In addition to financial aid, U Central can assist students with registration and admissions.

Students seeking academic help in their studies can use university resources in addition to an instructor’s office hours. University Resources include the Advising Center, Career Center, Counseling Center, Learning Center, and Writing Center. The centers provide services such as tutoring, writing help, critical thinking, study skills, degree planning, and student employment. Locations are:

<table>
<thead>
<tr>
<th>Center Name</th>
<th>Brownsville Campus</th>
<th>Edinburg Campus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advising Center</td>
<td>BMAIN 1.400 (956) 665-7120</td>
<td>ESWKH 101 (956) 665-7120</td>
</tr>
<tr>
<td>Career Center</td>
<td>BCRTZ 129 (956) 882-5627</td>
<td>ESSBL 2.101 (956) 665-2243</td>
</tr>
<tr>
<td>Counseling Center</td>
<td>BSTUN 2.10 (956) 882-3897</td>
<td>EUCTR 109 (956) 665-2574</td>
</tr>
<tr>
<td>Learning Center</td>
<td>BMSLC 2.118 (956) 882-8208</td>
<td>ELCTR 100 (956) 665-2585</td>
</tr>
<tr>
<td>Writing Center</td>
<td>BUBLB 3.206 (956) 882-7065</td>
<td>ESTAC 3.119 (956) 665-2538</td>
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