Stipulations in this syllabus are subject to modification and correction during the semester. All modifications (if any) will be discussed in class or posted on the course Blackboard site.

I. **Instructors:**

Dr. James Becvar  
Office: PSCI 409/CCSB 2.0114  
Phone: 747-7563  
Email: jbecvar@utep.edu  
Office Hours: TR 9:30 am – 10:30 am  
or by appointment

Dr. Wen-Yee Lee  
Office: CCSB 2.0110  
Phone: 747-8413  
Email: wylee@utep.edu  
Office Hours: TR 10:30 am – 11:30 am  
or by appointment

II. **Learning Goals:**

This is the first part of General Chemistry for scientists, engineers and pre-medical students. The students in the class will gain fundamental knowledge in atomic and molecular structure, nomenclature, physical and chemical changes of matter, chemical reactivity, chemical bonding, thermochemistry and the properties of gases.

**Prerequisites:** In order to be enrolled in Chemistry 1305, you should have:
- Passed or be concurrently enrolled in Math 1508 or
- Have achieved an SAT Math score of 600 or better.

**Student Major:**

The CHEM 1305 - 1306 sequence is designed for students who are majoring in a field of science or engineering.

Students majoring in other disciplines may prefer to take the CHEM 4107 - 4108 sequence which contains more descriptive and less quantitative material.

III. **Course Information:**

This lecture course has two components that all students must register for (1) **CHEM 1305 Lecture** and (2) **CHEM 1305 Lecture Workshop**.

Laboratory CHEM 1105 is a separate co-requisite course, in which students must also be enrolled.

If you are interested in honors credit, please take the honors section.

**Required Course Materials:**

1. **Textbook:** *Chemistry*, by Raymond Chang, 10th Edition, McGraw-Hill Science. Any newer or older version of this textbook may also be used for this course. It is the student’s complete responsibility to resolve any content differences.
Note: The 10th edition textbook will also be used in the CHEM 1306, the second semester general chemistry, in the following next semester.

2. "General Chemistry by Exploration: Resource Book for Peer-Led Team Learning First Semester", It is only available in the UTEP campus bookstore and the alternative bookstore on Mesa St.

Workshop:
• Workshop is a required component of CHEM 1305. Every student enrolled in a 1305 lecture section must also be co-enrolled in a Workshop section.
• Each Workshop meets for a two-hour period, and is instructed by a Peer Leader. The Workshop format allows the Peer Leaders to use active learning techniques to enhance understanding of the chemical principles discussed in class. It also provides opportunities for hands-on exposure to qualitative and descriptive chemistry activities (Explorations).
• Grading policy: based on participation and involvement. Absence, tardiness, or “inactive” in the Workshop will result in a grade reduction.
• Goggles must be worn during ALL chemical Explorations.
• Workshop Office Hour: PLs have office hour daily from 11 am to 5 pm. The location of the office hours will be announced in the workshop. Though each PL has specific office hours each week, you may consult with any PL during her or his office hours.

Resources:
1. Blackboard: Announcements and class notes will be made using Blackboard.
   Accessing Blackboard
   • You can access Blackboard via your myUTEP page but you will need your email username and password. If you don’t know your email username and password, call the HELP desk to request them.
   • Go to My.UTEP.edu and log in
   • Click on Blackboard — it’s on the menu bar at the top of the page.

2. Secretarial Services
   The office of Chemistry Department is located in the new Chemistry and Computer Science Building CCSB 2.0704. Office hours are from 8:00 am to 12noon and the 1:00 PM - 5:00 PM; the office is closed for lunch (12 noon - 1:00 PM).

Instructor Expectations:
• Students should attend all lectures and workshops, and complete homework assignment. It is the students’ responsibility to finish the work and turn in to their PLs by due dates.
• Students will read the chapters covered in class and consult with the professors or PLs for any questions.

Course Withdrawal Policy
Classes dropped prior to the official census date will be deleted from the student’s semester record. After this date, the University permits any student to drop with an
automatic “W” by the course dropping deadline. After this date students who withdraw must receive grades of “F”.

IV. Laboratories
Not like the Workshop which is an integral part of CHEM 1305, the Lab, CHEM 1105, is a separate course from CHEM 1305. The content for CHEM 1105 laboratory may not be completely coincided with the materials covered in lectures. The laboratory is highly recommended for all students regardless of major.

V. Examinations:
• CHEM 1305 examination questions are designed to test: i) understanding of basic concepts, and ii) familiarity with chemical nomenclature, usage and calculations. Students are encouraged to learn the process involved in problem solving rather than memorization of specific facts.
• Four one-hour examinations and a Final Exam are scheduled (see Section IX for exam dates). All exam grades will count towards the grade.
• ACS Standardized Exam will be used for the final exam. More details will be announced during the semester.
• No makeup of examinations will be provided unless approved by the instructor prior to the exams. Valid absences for University related activities (e.g. out-of-town research presentations, sporting events) must be arranged prior to the date of the respective examination.
• During the exam:
  – Bring your student ID to all exams for verification.
  – NO CELL PHONES OR OTHER ELECTRONIC DEVICES MAY BE USED DURING EXAMINATIONS.
  – No caps or hats may be worn during examinations. Bring a photo identification card to all examinations. ID will be checked during or when turning in the exam.
  – Do not bring programmable calculators (i.e. a calculator not capable of retaining equations or words) to the hour examinations and the final examination. You can purchase a satisfactory calculator which can perform logarithmic and exponential operations (needed for Chem. 1306) for less than $10 at many stores.

VI. Academic honesty:
Materials (written or otherwise) submitted to fulfill academic requirements must represent a student’s own efforts. Any act of academic dishonesty attempted by a UTEP student is unacceptable and will not be tolerated. Academic dishonesty is prohibited and is considered a violation of the UTEP Handbook of Operating Procedures. It includes, but is not limited to, cheating, plagiarism, and collusion. Violations will be taken seriously and will be referred to the Dean of Students Office for possible disciplinary action.

VII. Students with Disabilities:
Student with a disability can contact Disabled Student Services to take exams with appropriate accommodations. The office is located in Room 106 Union East Building and can be contacted at (915) 747-5148 Voice/TTY, (915) 747-8712 Fax or at dss@utep.edu.
VIII. Evaluation: (Evaluation is subject to revision.)

1. Exams:
   - Exam I 100 pts
   - Exam II 100 pts
   - Exam III 100 pts
   - Exam IV 100 pts
   - Final 250 pts

2. Homework: 150 pts

3. Workshop: 200 pts
   - Preparation: 10 %
   - Participation: 40 %
   - Workshop Quizzes: 50 %

   TOTAL 1000 pts

Expected grade breakdowns are:
## IX. Lecture Schedule (subject to change)

<table>
<thead>
<tr>
<th>Week</th>
<th>Chapter[^1]</th>
<th>Homework[^2,^3]</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. (8/25-8/29)</td>
<td>1. Chemistry</td>
<td>Unit 1</td>
<td></td>
</tr>
<tr>
<td>2. (9/1-9/5)</td>
<td>2. Atoms, Molecules, and Ions</td>
<td>Unit 2</td>
<td>1-Sep, Labor Day - University Closed</td>
</tr>
<tr>
<td>3. (9/8-9/12)</td>
<td>3, Mass Relationships in Chemical Reactions</td>
<td>Unit 3 (Workshop 1-12; Worksheet 1-8)</td>
<td>10-Sep Census Day – Last Day to drop without W</td>
</tr>
<tr>
<td>4. (9/15-9/19)</td>
<td><strong>Exam 1, Chapters 1-3 (3-7), 9/15 &amp; 16</strong></td>
<td>Unit 3</td>
<td>19-Sep, Pass/Fail Grade Option Selection Deadline</td>
</tr>
<tr>
<td>5. (9/22-9/26)</td>
<td>4. Reactions in Aqueous Solution</td>
<td>Unit 4 (Workshop 1-12, 18, 19; Worksheet 1-9)</td>
<td></td>
</tr>
<tr>
<td>6. (9/29-10/3)</td>
<td>5. Gases</td>
<td>Unit 4</td>
<td></td>
</tr>
<tr>
<td>7. (10/6-10/10)</td>
<td>6. Thermochemistry</td>
<td>Unit 6</td>
<td></td>
</tr>
<tr>
<td>8. (10/13-10/17)</td>
<td><strong>Exam 2, Chapters 3-5, 10/13 &amp; 14</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. (10/20-10/24)</td>
<td>7. Quantum Theory and Electronic Structure of Atoms</td>
<td>Unit 7</td>
<td>27-Oct, Mid-term grades via e-mail 31-Oct, Course drop deadline</td>
</tr>
<tr>
<td>10. (10/27-10/31)</td>
<td>8. Periodic Relationships</td>
<td>Unit 8</td>
<td></td>
</tr>
<tr>
<td>11. (11/3-11/7)</td>
<td><strong>Exam 3, Chapters 6-8, 11/10 &amp; 11</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. (11/10-11/14)</td>
<td>9. Chemical Bonding I</td>
<td>Unit 9</td>
<td></td>
</tr>
<tr>
<td>15. (12/1-12/5)</td>
<td><strong>Exam 4, Chapters 9-10, 12/1 &amp; 2</strong></td>
<td></td>
<td>4-Dec, Completely Withdraw from all courses; 5-Dec, Dead Day</td>
</tr>
<tr>
<td>16. (12/8-12/12)</td>
<td>Final Exam on Tuesday, 12/9, Location to be Announced</td>
<td>7:00 am – 9:45 am</td>
<td></td>
</tr>
</tbody>
</table>

[^1]: Chapter designation is based on *Chemistry* by R. Chang, the 10th Ed.
[^2]: Homework unit designation is based on the Resource Book. Every unit includes problems in both Workshop and Worksheet.
[^3]: Homework is due the following week. For instance, Unit 1 Homework is assigned for week 1 and due in Week 2. Students will turn in the Homework to their PLs.