CHEM 1305
Elements of Chemistry

Instructor:  Dr. Steven King
Email:  steven.king@angelo.edu
Phone:  486-6625
Office: CAV 214B

Office Hours:  MWF 8:00 am – 9:00 am, TR 8:00 am – 9:00 am
Or by appointment

Course Information

Course Description
A survey of the fundamentals of chemistry.  An introduction to organic and physiological chemistry and a survey of the chemistry of environmental systems.

Prerequisite and Co-requisite Courses
none

Prerequisite Skills
Accessing Internet websites and using Basic Algebra.

Student Learning Outcomes
Upon completion of this course, students will be able to:

- Analyze complex problems and draw logical conclusions.
- Employ mathematics in the analysis of chemical problems

Course Delivery
This is a face-to-face course with learning resources and supplemental materials posted in Blackboard.  OWL2 that is included with the text is used for homework and Top Hat is used for attendance, participation, and quizzes.

DO NOT USE CELL PHONE DURING CLASS EXCEPT FOR TOPHAT
Required Texts and Materials
Introductory Chemistry: A Foundation Edition: 9th
Zumdahl • DeCoste
Scientific Calculator
Top Hat

Technology Requirements
To successfully complete this course, students need signup for Top Hat at https://tophat.com/.

Joincodes: MWF 122296 TR 500654

Owlv2 homework, see below.

Communication
Email is the preferred form of communication.

I will respond to email and/or telephone messages within 24 hours during working hours Monday through Friday. Weekend messages may not be returned until Monday.

Written communication via email: All private communication will be done exclusively through your ASU email address. Check frequently for announcements and policy changes. In your emails to me, include the course name and section number in your subject line.

Grading
Evaluation and Grades
Course grades will be determined as indicated in the table below.

<table>
<thead>
<tr>
<th>Evaluation Item</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hour Exam 3</td>
<td>360</td>
</tr>
<tr>
<td>Hour Exam 1</td>
<td>90</td>
</tr>
<tr>
<td>Final Exam</td>
<td>100</td>
</tr>
<tr>
<td>OWL Homework</td>
<td>200</td>
</tr>
<tr>
<td>Quizzes</td>
<td>150</td>
</tr>
<tr>
<td>Attendance</td>
<td>100</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1000</strong></td>
</tr>
</tbody>
</table>
**Grading System**

Course grades will be dependent upon completing course requirements and meeting the student learning outcomes.

The following grading scale is in use for this course:

- A = 90.0-100 points
- B = 80.0-89.9 points
- C = 70.0-79.9 points
- D = 60.0-69.9 points
- F = 0-59.9 points

**Assignment and Activity Descriptions**

**Quizzes**
Quizzes will be given on Thursday and Friday using Tophat.

**Hour Exams**
Most hour exams will cover material presented since the previous exam. However, the course builds on material delivered earlier, so the concepts, calculations, and techniques from earlier exams may be required.

**Make-up Exams**
Make-up exams will be at the discretion of your course instructor. Usually, allowances will only be made in the case of an excused university absence. Communication with your instructor prior to the exam date is **CRITICAL**.

**Final Exam**
The schedule for the 1305 final exams is shown below.

<table>
<thead>
<tr>
<th>Section</th>
<th>Class Days</th>
<th>Class time</th>
<th>Final Exam Date</th>
<th>Final Exam Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>010</td>
<td>MWF</td>
<td>10:00 am - 10:50 am</td>
<td>Monday, May 4</td>
<td>10:30 am - 12:30 am</td>
</tr>
<tr>
<td>020</td>
<td>TR</td>
<td>9:30 am - 10:45 am</td>
<td>Thursday, May 9</td>
<td>8:00 am - 10:00 am</td>
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</tbody>
</table>
Computer Homework

OWL is an online homework program which accompanies the Zumdahl • DeCoste textbook. The assignments have due dates and you cannot continue to work after the due date. These assignments will be averaged to give a maximum 200-POINT GRADE.

MWF  https://www.cengage.com/dashboard/#/course-confirmation/E-228H882QC6Q56/initial-course-confirmation
TR     https://www.cengage.com/dashboard/#/course-confirmation/E-228H8K2XQX9MF/initial-course-confirmation

General Policies Related to This Course

All students are required to follow the policies and procedures presented in these documents:

- Angelo State University Student Handbook¹
- Angelo State University Catalog²

Academic Integrity

Students are expected to maintain complete honesty and integrity in all work. Any student found guilty of any form of dishonesty in academic work is subject of disciplinary action and possible expulsion from ASU.

The College of Science and Engineering adheres to the university’s Statement of Academic Integrity.³

Accommodations for Students with Disabilities

ASU is committed to the principle that no qualified individual with a disability shall, on the basis of disability, be excluded from participation in or be denied the benefits of the services, programs or activities of the university, or be subjected to discrimination by the university, as provided by the Americans with Disabilities Act of 1990 (ADA), the Americans with Disabilities Act Amendments of 2008 (ADAAA) and subsequent legislation.

Student Disability Services is located in the Office of Student Affairs, and is the designated campus department charged with the responsibility of reviewing and authorizing requests for reasonable accommodations based on a disability. It is the student’s responsibility to initiate such a request by contacting an employee of the Office of Student Affairs, in the Houston Harte University Center, Room 112, or
contacting the department via email at ADA@angelo.edu. For more information about
the application process and requirements, visit the Student Disability Services website. The employee charged with the responsibility of reviewing and authorizing
accommodation requests is:

Dallas Swafford
Director of Student Disability Services
Office of Student Affairs
325-942-2047
dallas.swafford@angelo.edu
Houston Harte University Center, Room 112

Incomplete Grade Policy
It is policy that incomplete grades be reserved for student illness or personal misfortune. Please contact faculty if you have serious illness or a personal misfortune that would keep you from completing course work. Documentation may be required. See ASU Operating Policy 10.11 Grading Procedures for more information.

Student Absence for Observance of Religious Holy Days
A student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence. See ASU Operating Policy 10.19 Student Absence for Observance of Religious Holy Day for more information.

Title IX at Angelo State University
The University prohibits discrimination based on sex, which includes pregnancy, sexual orientation, gender identity, and other types of Sexual Misconduct. Sexual Misconduct is a broad term encompassing all forms of gender-based harassment or discrimination including: sexual assault, sex-based discrimination, sexual exploitation, sexual harassment, public indecency, interpersonal violence (domestic violence and/or dating violence), and stalking. As a faculty member, I am a Responsible Employee meaning that I am obligated by law and ASU policy to report any allegations I am notified of to the Office of Title IX Compliance.

Students are encouraged to report any incidents of sexual misconduct directly to ASU’s Office of Title IX Compliance and the Director of Title IX Compliance/Title IX Coordinator at:

Michelle Boone, J.D.
Director of Title IX Compliance/Title IX Coordinator
Mayer Administration Building, Room 210
You may also file a report online 24/7 at www.angelo.edu/incident-form.

If you are wishing to speak to someone about an incident in confidence you may contact the University Health Clinic and Counseling Center at 325-942-2173 or the ASU Crisis Helpline at 325-486-6345.

For more information about Title IX in general you may visit www.angelo.edu/title-ix.

### Course Schedule

<table>
<thead>
<tr>
<th>Week of</th>
<th>Topic / textbook sections</th>
</tr>
</thead>
</table>
| Jan 13  | Syllabus, Introduction, Significant digits, units, conversion factors, density – 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.8  
Matter – 3.1, 3.2, 3.3 |
| Jan 20  | Monday Holiday. Element names and symbols – 4.1, 4.2, 4.3, 4.4  
Atomic structure and periodic table – 4.5, 4.6, 4.7, 4.8, 4.9, 4.10, 4.11  
Atomic Theory 11.1, 11.4, 11.5, 11.6, 11.7, 11.8, 11.9, 11.10, 11.11 |
| Jan 27  | Binary ionic compounds – 5.1, 5.2  
Binary covalent compounds – 5.3, 5.4 |
| Feb 3   | **Exam 1 Wed, Feb 5, Thu Feb 6**  
Covalent bonding – 12.1, 12.2, 12.3, 12.4, 12.5, 12.6, 12.7, 12.8  
Polyatomic ions - 5.5, Acids and Bases – 5.6, |
| Feb 10  | Chemical reactions – 6.1, 6.2, 6.3  
Type of reaction handout |
| Feb 17  | Moles – 8.3, 8.4, 8.5 |
| Feb 24  | **Exam 2 Wed Feb 26, Thu Feb 27**  
Stoichiometry calculations – 9.1, 9.2, 9.3 |
| Mar 2   | Energy 10.1, 10.2, 10.3, 10.4, 10.5, 10.6, 10.7, 10.8, 10.9, 10.10 |
| Mar 9   | **SPRING BREAK** |
| Mar 16  | Gases – 13.1 – 13.9 |
**Exam 3 Wed, Mar 25, Thu Mar 26** |
<p>| Mar 30  | More definitions of acids and bases – 16.1, 16.2, 16.3 |
| Apr 6   | pH Scale – 16.4, <strong>HOLIDAY FRIDAY</strong> |
| Apr 13  | Equilibrium |
| Apr 20  | <strong>Exam 4 Wed Apr 22, Thu Apr 23</strong> |</p>
<table>
<thead>
<tr>
<th>Week of</th>
<th>Topic / textbook sections</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apr 27</td>
<td>Radioactivity</td>
</tr>
<tr>
<td>May 4</td>
<td>Final Exam (see final exam schedule)</td>
</tr>
</tbody>
</table>

Syllabus may be modified at the discretion of the instructor. Timely notification will be announced in class and posted in Blackboard.

1. [https://www.angelo.edu/student-handbook/](https://www.angelo.edu/student-handbook/)
2. [https://www.angelo.edu/catalogs/](https://www.angelo.edu/catalogs/)
4. [https://www.angelo.edu/services/disability-services/](https://www.angelo.edu/services/disability-services/)
5. [https://www.angelo.edu/content/files/14197-op-1011-grading-procedures](https://www.angelo.edu/content/files/14197-op-1011-grading-procedures)
6. [https://www.angelo.edu/content/files/14206-op-1019-student-absence-for-observance-of](https://www.angelo.edu/content/files/14206-op-1019-student-absence-for-observance-of)