

Syllabus CHEM 1305 --- Elements of Chemistry Fall 2019

Faculty Information

Dr. Steven King

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Office hours: MWF 8:30 am - 9:30 am, TR 8:30 am – 9:30 am

Or by appointment

CHEM 1305 Classes

SEC	Days	Time	Instructor	Location
010	MWF	11:00 am - 11:50 am	Dr. King	CAV 200
020	TR	9:30 am - 10:45 am	Dr. King	CAV 223

Required Supplies

Textbook

Introductory Chemistry A Foundation: 9th Edition

Zumdahl • DeCoste

Scientific Calculator

Top Hat

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.

Grading

Hour Exam 3 @ 120 points	360 points
Hour Exam 1 @ 90 points	90 points
Final Exam	100 points
OWL Homework	200 points
Quizzes	150 points
Attendance	100 points
Total	1000 points

Points Breakdown

A	90 – 100 %	900 – 1000 points
B	80 – 89.9 %	800 – 899 points
C	70 – 79.9 %	700 – 799 points
D	60 – 69.9 %	600 – 699 points
F	<60%	0 – 599 points

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 1405 final exams is shown below. The complete final exam schedule is available on the web <http://www.angelo.edu/services/registrar/office/final.html>ⁱ

Section	Class Days	Class time	Final Exam Date	Final Exam Time
010	MWF	11:00 am - 11:50 am	Wednesday, Dec 11	10:30 am - 12:30 pm
020	TR	9:30 am - 10:45 am	Thursday, Dec 12	8:00 am - 10:00 am

Attendance – Effects your final grade

You are expected to attend all class meetings. You are expected to arrive on time and to stay until the end of the lecture. You will not be automatically dropped if you stop attending class. If you have the **FLU**, please stay home. Do not help spread the flu to everyone else. Keep your instructor informed by email (preferred) or telephone (if necessary). Your instructor will work with you to keep you up to date in the class. **DO NOT USE CELL PHONE.**

Last Day to Drop

The last day to drop the course with a grade of “W” is **Thursday, October 31, 2019.**

Blackboard

Grades, information, handouts, homework assignments, and other course documents will be posted on Blackboard. <http://blackboard.angelo.edu>ⁱⁱ(or access Blackboard from Rampart).

Students are expected to check Blackboard daily and will be held responsible for all announcements, assignments posted to Blackboard.

Honor Code / Academic Dishonesty

Angelo State University expects its students to maintain complete honesty and integrity in their academic pursuits. Students are responsible for understanding the Academic Honor Code, which is found in the Student Handbook (www.angelo.edu/cstudent/ⁱⁱⁱ). The penalty for **ANY** sort of dishonesty, cheating or plagiarism can range from a grade of zero on assignments to an F in the course and disciplinary action warranted in accordance with university guidelines.

Disabilities

Persons with disabilities which may warrant academic accommodations must contact the Student Life Office, Room 112 University Center, in order to request and to implement academic accommodations.

Observances of Religious Holidays

A student who intends to observe a religious holy day should make that intention known **in writing (email)** to me **prior** to the absence. A student who is absent from classes for the observance of a religious holy day shall be allowed to take an examination or complete an assignment scheduled for that day within what the instructor deems a reasonable time after the absence.

Computer Homework

OWL is an online homework program which accompanies the Zumdahl • DeCoste textbook. These assignments will be averaged to give a maximum **200-POINT GRADE**.

MWF <https://login.cengagebrain.com/course/E-228H6WXXCQ7RL>^{iv}

TR <https://login.cengagebrain.com/course/E-228HYB8WWZ6L5>^v

Lecture Schedule and Approximate Exam Cut-off Points --- Fall 2019

Week of	Topic / textbook sections
Aug 26	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
Sep 2	Monday 09/02, Labor Day 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
Sep 9	Binary ionic compounds – 5.1, 5.2 Binary covalent compounds – 5.3, 5.4
Sep 16	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,
Sep 23	Exam 1 Wed, Sep 25, Thu Sep 26 Chemical reactions – 6.1, 6.2, 6.3
Sep 30	Moles – 8.3, 8.4, 8.5
Oct 7	Stoichiometry calculations – 9.1, 9.2, 9.3
Oct 14	Exam 2 Wed, Oct 16, Thu Oct 17 Energy 10.1, 10.2, 10.3, 10.4, 10.5, 10.6, 10.7, 10.8, 10.9, 10.10
Oct 21	Gases – 13.1 – 13.9
Oct 28	Liquids and Solids – 14.1, 14.2, 14.3, 14.4
Nov 4	Exam 3 Wed, Nov 6, Thu Nov 7 More definitions of acids and bases – 16.1, 16.2, 16.3
Nov 11	pH Scale – 16.4
Nov 18	Equilibrium
Nov 25	Exam 4 Mon Nov 25, Tue Nov 26 Thanksgiving
Dec 2	Radioactivity
Dec 9	Final Exam (see final exam schedule)

Student Learning Outcomes

After completion of this course students will be able to:

- Analyze complex problems and draw logical conclusions.
- Employ mathematics in the analysis of chemical problems.
- Apply chemical concepts to contemporary societal problems.

Evaluation of Student Learning Outcomes

Student learning outcomes will be evaluated through written laboratory reports for each of the exercises listed above. No lab grades will be dropped; therefore attendance at all laboratory meetings is essential.

Texas Higher Education Coordinating Board Natural Science Objectives

The objective of the study of a natural sciences component of a core curriculum is to enable the student to understand, construct, and evaluate relationships in the natural sciences, and to enable the student to understand the basis for building and testing theories.

Exemplary Educational Objectives

1. To understand and apply method and appropriate technology to the study of natural sciences.
2. To recognize scientific and quantitative methods and differences between the approaches and other methods of inquiry and to communicate findings, analyses, and interpretations both orally and in writing.
3. To demonstrate knowledge of the major issues and problems facing modern science, including issues that touch upon ethics, values, and public policies.

ASU Core Curriculum Objectives for Chemistry 1305

Students in Chemistry 1305 will apply the following core curriculum learning objectives in critical thinking, communications, and teamwork.

Critical thinking will be demonstrated by class performance.

- Students will use their knowledge of chemical concepts to analyze problems related to topics discussed in class and choose the correct course of action to solve the problems.

Communication will be demonstrated by preparing laboratory reports.

- Students will organize and write a report clearly explaining the purpose, procedure, results and conclusion of a laboratory experiment.

Empirical and quantitative skills will be demonstrated by using equations to answer problems.

- Choose the appropriate equation and rearrange to solve for the unknown.
- Complete mathematical operations and report correct answer.

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

i http://www.angelo.edu/services/registrar_office/final.html

ii <http://blackboard.angelo.edu>

iii www.angelo.edu/cstudent/

iv <https://login.cengagebrain.com/course/E-228HY8TLMTSRW>

v <https://login.cengagebrain.com/course/E-228H8T626RRS7>