Introductory Chemistry I- Chem 1405 (dual credit)

Course Syllabus: Fall 2019

"Northeast Texas Community College exists to provide responsible, exemplary learning opportunities."

Bryan Trickey

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Office Hours (3rd period)	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**	**Online**
	10:00 AM to 10:50 AM	10:00 AM to 10:50 AM	10:00 AM to 10:50 AM	10:00 AM to 10:50 AM	10:00 AM to 10:50 AM	

The information contained in this syllabus is subject to change without notice. Students are expected to be aware of any additional course policies presented by the instructor during the course.

Catalog Course Description (include prerequisites):

A general course for the non-science major. An introduction to the discipline of chemistry including scientific measurements, atomic structure, bonding, stoichiometry, physical and chemical properties, energy, and chemical notation is presented. Successfully completion of this series meets many of the lab science requirements for undergraduate degree programs. CHEM 1405 and 1407 are considered a first course in chemistry and thus no prerequisites exist. However, many of the topics and concepts in CHEM 1405 will have been introduced in a high school pre-AP program. May be taken to prepare for CHEM 1411 but cannot be substituted for CHEM 1411.
4 credit hours.
Prerequisite: MATH 0305 or higher or equivalent.

Required Textbook(s):

- **Text:** *Chemistry, The Central Science by Brown and LeMay (provided by instructor)*
- **Lab Manual:** *Chemistry, The Central Science:Laboratory Experiments(provided by instructor)*

Publisher: Prentice Hall
ISBN Number: 0-13-061142-5

Core Curriculum Purpose and Objectives:

Through the core curriculum, students will gain a foundation of knowledge of human cultures and the physical and natural world; develop principles of personal and social responsibility for living in a diverse world; and advance intellectual and practical skills that are essential for all learning.

Courses in the foundation area of **life and physical sciences** focus on describing, explaining, and predicting natural phenomena using the scientific method. Courses involve the understanding of interactions among natural phenomena and the implications of scientific principles on the physical world and on human experiences.

College Student Learning Outcomes:

Critical Thinking Skills

CT.1

Students will demonstrate the ability to 1) analyze complex issues, 2) synthesize information, and 3) evaluate the logic, validity, and relevance of data.

Communication Skills

CS.1

Students will effectively develop, interpret and express ideas through written communication.

Empirical and Quantitative Skills

EQS.1

Students will manipulate numerical data or observable facts by organizing and converting relevant information into mathematical or empirical form.

EQS.2

Students will analyze numerical data or observable facts by processing information with correct calculations, explicit notations, and appropriate technology.

Team Work

TW2. Students will work with others to support and accomplish a shared goal.

Student Learning Outcomes:

1. Be able to define the fundamental properties of matter; to classify matter, compounds, and chemical reactions; and to identify trends in chemical and physical properties of the elements using the periodic table;

2. Be able to write chemical formulas, to write and balance equations, to use the rules of nomenclature to name chemical compounds, and to define the types and characteristics of chemical reactions;

3. Demonstrate the ability to solve stoichiometric problems, to convert units of measure, and to demonstrate dimensional analysis skills;

4. Obtain and introductory understanding of quantum mechanics, be able to apply the octet rule, draw resonance structures, and use VSEPR, valence bond, and molecular orbital theories;

5. Use the gas laws and basics of the Kinetic Molecular Theory to solve gas problems, determine the role of energy in chemical reactions, and solve thermochemistry problems; and

6. Use basic apparatus and apply experimental methodologies used in the chemistry laboratory.

7. Demonstrate safe and proper handling of laboratory equipment and chemicals.

8. Conduct basic laboratory experiments with proper laboratory techniques.

9. Working in teams of two, demonstrate use of critical thinking and scientific problem-solving skills in the laboratory including the ability to carry out experiments in a safe and efficient manner. Laboratory reports will be used to test the ability of students to work in teams and to interpret and to communicate results effectively in writing.

Assessment and Grading

Evaluations will be based on homework and lab assignments, discussions, quizzes, exams and a comprehensive final exam.

The percent breakdown is as follows:

Homework	20%
Quizzes	10%
Labs	25%
Exams	30%
Final Exam	15%

Learning objectives will be assessed through: quizzes, exams, labs, discussions, and a comprehensive final exam. In some cases quizzes and labs will utilize online resources such as NTCC Blackboard accounts or interactive internet sites. In all cases the actual assignment and due dates will be communicated in class and using Blackboard.

Quizzes/Homework

Quizzes will be short and very specific in their scope. The quiz format will vary and may take place in class or can be administered online. Homework will usually consist of problem sets from the text book or administered online.

Laboratory Assignments

Work in the laboratory is central to the topic of chemistry. Experiments performed in the chemistry laboratory can only be completed in the laboratory. If students miss an experiment is will be the student's responsibility for making up the experiment before or after school. Lab information will be provided by the instructor. Due to limitations of time in the classroom students will often be required to complete pre lab tasks or write lab procedures before working in the lab. Occasionally virtual lab experiments will be assigned utilizing internet resources. If a student does not have internet access at home they can complete these assignments in the high school library or my classroom before or after school.

Exams

All exams will be announced prior to taking the exam and will be posted online. Each exam will cover assigned readings, class lectures, discussion, homework and quizzes. The format of exams will generally be multiple choice and problem solving. During the course of each semester 4 exams will be administered. Students will be able to utilize instructor provide reference information such as periodic table and equations.

Final Exam

The final exam is comprehensive and covers all chapters and topics discussed during each semester. The format of the final exam will be multiple choice.

A final grade for the course will be based on the following scale:

Grade	% of Total Points
A	90 to 100
B	80 to 89
C	70 to 79
D	60 to 69
F	0 to 59

Student Responsibilities/Expectations:
Any assignment, lab, or test that is not completed by the assigned due date will be graded as is or assigned a zero.
The last day to drop the course with a grade of W is **Tuesday, Nov 19, 2019.** If circumstances require you to withdraw from this course, you must do so by that date. It is the **student's responsibility** to initiate the withdrawal with the registrar's office. **Failure to officially withdraw will result in your receiving a grade of F.**

NTCC Academic Honesty Statement:
"Students are expected to complete course work in an honest manner, using their intellects and resources designated as allowable by the course instructor. Students are responsible for addressing questions about allowable resources with the course instructor. NTCC upholds the highest standards of academic integrity. This course will follow the NTCC Academic Honesty policy stated in the Student Handbook."

Academic Ethics
The college expects all students to engage in academic pursuits in a manner that is beyond reproach. Students are expected to maintain complete honesty and integrity in their academic pursuit. Academic dishonesty such as cheating, plagiarism, and collusion is unacceptable and may result in disciplinary action. Refer to the student handbook for more information on this subject.

ADA Statement:
It is the policy of NTCC to provide reasonable accommodations for qualified individuals who are students with disabilities. This College will adhere to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations as required to afford equal educational opportunity. It is the student's responsibility to request accommodations. An appointment can be made with Shannin Garrett, Academic Advisor/Coordinator of Special Populations located in the College Connection. She can be reached at 903-434-8218. For more information and to obtain a copy of the Request for Accommodations, please refer to the NTCC website - Special Populations.

Family Educational Rights And Privacy Act (FERPA):
The Family Educational Rights and Privacy Act (FERPA) is a federal law that protects the privacy of student education records. The law applies to all schools that receive funds under an applicable program of the U.S. Department of Education. FERPA gives parents certain rights with respect to their children's educational records. These rights transfer to the student when he or she attends a school beyond the high school level. Students to whom the rights have transferred are considered "eligible students." In essence, a parent has no legal right to obtain information concerning the child's college records without the written consent of the student. In compliance with FERPA, information classified as "directory information" may be released to the general public without the written consent of the student unless the student makes a request in writing. Directory information is defined as: the student's name, permanent

address and/or local address, telephone listing, dates of attendance, most recent previous education institution attended, other information including major, field of study, degrees, awards received, and participation in officially recognized activities/sports.

Other Course Policies:
NA