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|  | **CHEM 1407 Introduction to Chemistry II**  **Course Syllabus:** Spring 2021 | | | | | |
| “Northeast Texas Community College exists to provide responsible, exemplary learning opportunities.”  **Lisa Shelton**  **Office:** PHS, room 214  **Phone:** 903-856-3646 ext 2214  **Email:** lshelton@ntcc.edu or lshelton@pittsburgisd.net | | | | | |
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| **Office Hours** | **Monday** | **Tuesday** | **Wednesday** | **Thursday** | **Friday** | **Online** |
| 7:55 – 8:44 | 7:55 – 8:44 | 7:55 – 8:44 | 7:55 – 8:44 | 7:55 – 8:44 |  |

*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.*

**Course Description:** Introductory Chemistry II is a continuation of CHEM 1405. This course includes the study of electrochemistry, solutions, acids and bases, chemical equilibria, kinetics and nuclear chemistry. Selected topics in organic and biochemistry will also be included. 4 credit hours. Prerequisite: CHEM 1405

**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**

**Student Learning Outcomes:**

1. Students will recognize factors that affect reaction rates; demonstrate the ability to determine reaction rate laws from experimental data and write equilibrium constant expressions for a reversible reactions and demonstrate the use of Le Chatelier’s principle.

2. Students will be able to identify characteristics of acids and bases and solve problems involving pH, the ionization constant of water, ionization constant values and acid-base titrations.

3. Students will identify the characteristics of salts, determine the solubility product constant for a salt and the corresponding implication on solubility including the impact of the common ion effect.

4. Students will understand entropy and how it relates to reaction spontaneity.

5. Students will solve problems involving enthalpy and entropy to determine the effect of temperature on spontaneity.

6. Students will be able to identify substances that are oxidized and reduced in a chemical reaction; identify and balance oxidation-reduction equations, and solve redox titration equations.

7. Working in teams, students will demonstrate safe and proper handling of laboratory equipment and chemicals and carry out experiments and experimental work by calculating, interpreting and communicating experimental results clearly in lab notebooks or written reports.

***Assessment and Grading***

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

The percent break down is as follows:

Homework and quizzes 20%

Labs 20%

Exams 40%

Final Exam 20%

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 Mastering Chemistry. In all cases the actual assignment and due dates will be communicated in class.

**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 7 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

**Tests/Exams:**

All exams are administered in class. The final exam is comprehensive. The tentative schedule is as follows:

Exam Textbook

# 1 Kinetics

# 2 Acid and Base

# 3 Equilibrium

# 4 Electrochemistry and Thermodynamics (expanded upon: Gibbs)

# 5 Nuclear

Final Exam all covered topics

**Assignments:**

All assignments will be listed and due dates identified in class and utilizing Mastering chemistry.

**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.

**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 arrange an appointment with a College counselor to obtain a Request for Accommodations form.  For more information, please refer to the NTCC Catalog or Student Handbook.

**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.

# Communications:

# NTCC email is the official form of communication used by the college. Email communications from non-NTCC email addresses run the risk of being marked as spam and may not be answered

# Course announcements that occur outside of lecture and lab sessions will be announced via Blackboard’s announcement feature. These will be cc’d to students via NTCC email.

# Students are expected to check Blackboard and their NTCC email accounts regularly.

# All grading policies and due dates for online homework assignments are listed in the online homework system.

# Institutional/Course Policy:

# Students shouldexpecttobeworkingonassignmentsoutsideofclassontheirowntime throughout the entire duration of this course. For each hour that you spend in class, plan to spend a minimum of three hours out of class studying, reading the book, working on homework problems, etc.

**Alternate Operations During Campus Closure and/or Alternate Course Delivery Requirements**

In the event of an emergency or announced campus closure due to a natural disaster or pandemic, it may be

necessary for Northeast Texas Community College to move to altered operations. During this time, Northeast Texas Community College may opt to continue delivery of instruction through methods that include, but are not limited to, online through the Blackboard Learning Management System, online conferencing, email messaging, and/or an alternate schedule.  It is the responsibility of the student to monitor NTCC’s website (<http://www.ntcc.edu/>) for instructions about continuing courses remotely, Blackboard for each class for course-specific communication, and NTCC email for important general information.

Additionally, there may be instances where a course may not be able to be continued in the same delivery format as it originates (face-to-face, fully online, live remote, or hybrid).  Should this be the case, every effort will be made to continue instruction in an alternative delivery format.  Students will be informed of any changes of this nature through email messaging and/or the Blackboard course site.

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