MIDSTATE COLLEGE
411 W. NORTHMOOR RD. PEORIA, IL 61614
(309) 692-4092 (800) 251-4299
Fall 2016

Course number & Name: CHE 106 Introduction to Chemistry

Credit hours: 4 quarter hours **Method of Delivery:** classroom

Text: Chemistry: An Introduction to General, Organic, and Biological Chemistry 12th ed.
Author: Timberlake
Publisher: Pearson

Course Description: IAI approved for transfer as P1 902
One-quarter introductory chemistry course for non-science majors. In general, emphasis will be placed on elementary concepts, dimensional analysis, and problem-solving skills. In particular, emphasis will be placed on atomic structure, molecular structure, bonding, stoichiometry, chemical calculations, states of matter, gas laws, and acids, bases, and salts. Achieve an overall average of 'C'.

Topics: to be covered: Properties, measurement, scientific notation, atoms, periodic table, ions, molecules, chemical equations, gases, water, acids, bases, pH concepts, organic compounds.

Learning Objectives: Upon completion of this course, the student will be able to:
1. understand and use measurements, unit systems, and dimensional analysis in calculations.
2. describe the basic concepts of matter, the structure of the atom, the periodic table, and nomenclature.
3. competently perform chemical calculations. These calculations include formula weights, percentage composition, calculations related to mass, mole, and Avogadro's number, writing balanced equations, calculating the amount of initial reactants an/or products in balanced equations, determining the limiting reactant, and determining different types of yields.
4. perform calculations using the Gas Laws.
5. perform calculations using the concepts of acids, bases, and salts.
6. describe and differentiate the difference between inorganic and organic chemistry.

Midstate Grading scale:

90 - 100	A
80 - 89	B
70 - 79	C
60 - 69	D
0 - 59	F

Midstate Plagiarism Policy:

Plagiarism is using another person's words without giving credit to the author. Original speeches, publications, and artistic creations are sources for research. If students use the author's words in a paper or assignment, they must acknowledge the source. Plagiarism is strictly against the academic policy of the college and is grounds for failing the course. If repeated, plagiarism may result in suspension from the college. (See the Midstate College catalog and/or Student Handbook for additional information.)

In courses containing writing assignments, the college promotes the use of an electronic resource which compares the student's writing against previously submitted papers, journals, periodicals, books, and web pages. Students and instructors can use this service to reduce the incidence of plagiarism. This electronic resource has been found to conform to legal requirements for fair use and student confidentiality. It is able to provide a report to the student indicating the parts of the assignment that match.

Student Success:
The Office of Student Success is available to students seeking tutoring for individual classes or who need assistance with writing assignments. Information is also available on test taking techniques, how to take notes, developing good study skills, etc. Contact Student Success in Room 217 (in person); (309) 692-4092, extension 2170 (phone); studentsuccess@midstate.edu (email).

Instructor Information: Alan M. Paredes Ph.D., Room 300, (309) 692-4092, aparedes@midstate.edu, Office Hours: M/W 4 pm – 6 pm.

Participation Requirements/Policies and Procedures:
Attendance is necessary to achieve a grade of 'C' or better.

Assessment of learning/Methods of evaluating student performance:

There will be four tests worth 100 points each. The test will be problems that are similar to the homework. There will be 20 problems on each test. Attendance is important and will count for approximately 10% of the grade. Tests will be graded and handed back so the student can see where they might have made potential mistakes.

Instructor's Grading Scale:

90 - 100	A
80 - 89	B
70 - 79	C
60 - 69	D
0 - 59	F

Course Schedule:

Week One

Introduction/course administration

Topics: This chapter includes properties and physical quantities, units and standards of measurement, scientific notation, accuracy and precision, factor label method, heat energy and density.

Objectives: Upon completion of this course, the student will be able to understand and use measurements, unit systems, and dimensional analysis in calculations.

Assignments: Read chapter one and do the problems marked in "red."

Week Two

Topics: This chapter includes the study of matter, atomic theory, electron configurations of atoms, elements, and the periodic law and table.

Objectives: Upon completion of this course, the student will be able to understand the theory of the atom

Assignments: Read chapter two and do the problems marked in "red."

Week Three

Topics: This chapter includes the octet rule, ions and ionic compounds, molecules and molecular compounds, polar molecules.

Objectives: Upon completion of this course, the student will be able to understand the describe the basic concepts of matter, the structure of the atom, the periodic table, and nomenclature.

Assignments: Read chapter three and do the problems marked in "red."

Test One

Week Four

Topics: This chapter includes chemical equations, Avogadro's number, and formula masses and molecular masses. the mole, and molar concentration.

Objectives: Upon completion of this course, the student will be able to understand the describe the basic concepts of matter, the structure of the atom, the periodic table, and nomenclature.

Assignments: Read chapter four and do the problems marked in "red."

Week Five

Topics: This chapter includes chemical equations, Avogadro's number, and formula masses and molecular masses, the mole, and molar concentration.

Objectives: Upon completion of this course, the student will be able to understand the competently perform chemical calculations. These calculations include formula weights, percentage composition, calculations related to mass, mole, and Avogadro's number, writing balanced equations, calculating the amount of initial reactants an/or products in balanced equations, determining the limiting reactant, and determining different types of yields.

Assignments: Read chapter five and do the marked problems in "red" up to page 162.

Week Six

Topics: This chapter includes chemical equations, Avogadro's number, and formula masses and molecular masses, the mole, and molar concentration.

Objectives: Upon completion of this course, the student will be able to understand the competently perform chemical calculations. These calculations include formula weights, percentage composition, calculations related to mass, mole, and Avogadro's number, writing balanced equations, and determining different types of yields.

Assignments: Read chapter five and do the marked problems in "red" up to page 187.

Test Two

Week Seven

Topics: This chapter includes the gas laws (Boyles law, Charles law, Gay Lussac's law)

Objectives: Upon completion of this course, the student will be able to understand the perform calculations using the Gas Laws.

Assignments: Read chapter six and do the problems marked in "red."

Week Eight

Topics: This chapter includes Sources of ions and electrolytes, common aqueous acids and bases, and chemical properties of aqueous acids and bases.

Objectives: Upon completion of this course, the student will be able to understand the perform calculations using the concepts of acids, bases, and salts.

Assignments: Read chapter seven and do the problems marked in “red.”

Week Nine

Topics: This chapter includes Sources of ions and electrolytes, common aqueous acids and bases, and chemical properties of aqueous acids and bases.

Objectives: Upon completion of this course, the student will be able to understand the This chapter includes Sources of ions and electrolytes, common aqueous acids and bases, and chemical properties of aqueous acids and bases

Assignments: Read chapter eight and do the problems marked in “red.”

Test Three

Week Ten

Topics: Organic compound and their properties

Objectives: Upon completion of this course, the student will be able to understand the describe and differentiate the difference between inorganic and organic chemistry

Assignments: Read chapter ten and do the marked problems in “red.”

Week Eleven

Topics: Organic compound and their properties

Objectives: Upon completion of this course, the student will be able to understand the describe and differentiate the difference between inorganic and organic chemistry

Assignments: Read chapter eleven and do the marked problems in “red.”

Week Twelve

Final Exam