Syllabus:
General Chemistry I
The School of Arts & Sciences
St. Thomas Aquinas College

Course Description: This is the first half of a two-semester sequence of a course designed to lay a firm foundation for more advanced chemistry, forensic science and other science courses. To successfully achieve the objectives of this course, a student must be prepared to devote on a regular basis a minimum of 8 hours per week to serious study of the subject matter.

Prerequisites: Students must have completed a course at the level of MATH 101 or a higher level course in mathematics.

Required Materials:

- Ebbing and Gammon, General Chemistry, 10th edition
- Online Homework Account with Sapling Learning
- Scientific calculator

Course Objectives: On successful completion of this course of study, the student will have knowledge of the following topics:

I. Structure of atoms, molecules and ions
II. Chemical formulas and equations
III. Chemical Stoichiometry
IV. Thermochemistry
V. Gas Laws
VI. The electron structure of the atom
VII. Periodic classification of the elements
VIII. Chemical bonds
IX. Physical properties as related to chemical structure

Student Evaluation and Grades:

1. Three exams	45 % (15 % each)
2. Homework, pre-class assignments and recitation	15 %
3. Quizzes (3 or 4 throughout the semester)	20 %
4. Cumulative Final	20 %

Online Homework: After each chapter, problems will be assigned using an online homework program called Sapling Learning. Notice will be given for the due dates of the homework assignments on a weekly basis. Working the problems helps you prepare for class and the exam. If, at the end of the semester, you had consistently handed in your homework and performed well but your average is borderline, your effort will be taken into consideration when the final grade is assigned. See handout for information regarding access to Sapling Learning.

In class/Pre-class assignments: Periodically, brief in class assignments will be given and collected. Participation is expected in all activities and assignments in class. Pre-class assignments will also be given. These assignments will be used to assess how you are learning the material and what groups you will be placed in for the recitation sections.

Quizzes: Quizzes will be announced ahead of time and given roughly 3 or 4 times through the semester. Quizzes will be given at the beginning of the normal class time and will usually last ~ 30 min.

Exams: The first two exams will be 1 hour in length and given on Fridays during the recitation sections. See schedule below. The third exam will be given during last regularly scheduled class before Thanksgiving break.

Attendance Policy: Students are expected to be present at every class meeting (lecture and recitation). If you must miss a class please notify the instructor before the beginning of class. Absence from any examination or quiz will result in a zero grade for that session. In cases of documented and verifiable personal illness or other serious emergency you may be permitted to take a make-up examination. **If a student misses 3 or more class meetings the student's grade will be lowered by one letter grade.**

Plagiarism and Cheating: Trying to present another person's work as your own original work is plagiarism. This is academically dishonest and will be dealt with severely, as will cheating on any examination or quiz. The student is referred to the College catalog for more information.

Class Policies:

Please turn off all cell phones prior to the start off class.
Please bring your textbook and scientific calculator to every class period.

Academic Integrity:

Academic Integrity, a commitment to honesty, fairness, respect, and responsibility, is the foundation of the learning process. All members of the St. Thomas Aquinas College community are held to the highest standards of academic honesty. While we recognize the participatory nature of education, we take academic integrity very seriously, and the College policy on academic dishonesty details consequences that can include dismissal from the College. That policy can be found in both the Student Handbook and the College Catalog.

As a student in this class, you must demonstrate your commitment to academic integrity by submitting work which you have personally completed, representing your best effort and which

originates in your own imagination, thought, analysis, or knowledge. When your work requires inclusion of information and substantiation from other sources, you must always ensure that these sources are properly cited using the recommended documentation system.

Academic Disability Statement:

Students requiring accommodations for a documented disability should notify the instructor before the end of the first week of class.

College Policy on Electronic Devices in the Classroom:

Students are not allowed to use any electronic device at any time without the expressed consent of the professor. This policy addresses the use of cell phones, laptop computers, or any other device whose use the professor determines constitutes a distraction to him or to the other students in the class. Students with documented disabilities that require the use of a laptop in class may use them after informing their professor.

When a professor designates a time during which laptop computers may be used, they may only be used at the discretion of the faculty member and in accordance with the mission of the college; visiting sites which are not pertinent to the task at hand is forbidden.

Professors have the latitude to develop specific and reasonable policies to deal with violations of these general policies as they see fit. For more extreme cases of classroom disruption, see the College's Disruptive Student Policy.

Respect and Behavior in the classroom

Respect for everyone in the classroom is required of both students and the instructor. Cell phone use is strictly prohibited because it is disruptive of learning.

STAC Grading Policy:

A = 100 – 95 %
A- = 94-90 %
B^+ = 89-87 %
B = 86-83 %
B^- = 82-80 %
C^+ = 79-77 %
C = 76-73 %
C^- = 72-70 %
D = 69-65%
F = 64-0 %

Date	Chapter	Topics
9/9	1	Intro, Changes, Density (Dim analysis and SI units)
9/11*	2	Atomic structure, ions, periodic table (**In Recitation**)
9/14	2	Ions, Formulas and naming, Balanced Eqns
9/16	3	Moles, and calculations
9/21	3	MW, % Comp, empirical formulas
9/23	3	Stoichiometry
9/28	4	Types of Rxns, Precipitation, Net ionic eqns.
9/30	4	Redox, Acids and Bases (Not on Exam 1)
10/2*		**Exam #1**
10/5	4	Concentrations, gravimetric analysis, titrations
10/7	5	Ideal Gas Law
10/12		***No Class: Columbus Day***
10/14	5	KMT, real gases
10/19	5 6	Effusion, and collecting gasses over water What is Energy? Intro to Thermodynamics
10/21	6	Heat transfer, heat capacity, calorimetry
10/26	6	Enthalpy and Hess's Law
10/28	6 7	Practice as needed Quantum nature of light (Not on Exam 2)
10/30*		**Exam #2**
11/2	7	Energy levels, absorption and emission
11/4	7 8	Quantum numbers Electronic structure of the atom
11/9	8	Periodic trends and electron configurations
11/11	9	Bonding
11/16	9	Lewis dot structures, resonance
11/18	9	Electronegativity, polar bond
11/23		**Exam # 3**
11/25		***No Class: Thanksgiving Break 26-30***
11/30	9 10	Bond order, length, energy Intro to molecular shapes
12/2	10	Practice molecular geometries, dipole moments
12/7	10	Delocalization, hybrid orbitals
12/9	10	Finish Chap 10
12/14		Review
12/16		**Cumulative Final Exam**
12/18*		Make up day (if needed)