



A division of St. Francis Methodist School

Curriculum Description for St. Francis Baccalaureate

Chemistry 111 General Chemistry 1

4 Credits

Course Description:

This course provides an introduction to chemistry and covers such topics as stoichiometry, periodic properties of representative elements, structure of atoms and molecules, and properties of gases, liquids, and solids. The prerequisite or co-requisite for this course is college algebra or equivalent.

Course Objectives:

Upon completion of this course the student should;

- 1) enjoy learning about chemistry and science.
- 2) be comfortable working with the metric system of measurement.
- 3) know the basic components of an atom and how they are arranged.
- 4) be able to name simple inorganic compounds.
- 5) understand the principles that apply to ideal gases.
- 6) understand the general concepts behind chemical bonding and how this leads to the three dimensional structures of molecules.
- 7) know how to work with various concentration units for substances in solution.
- 8) be able to design an experiment after thinking critically about lab data.

Required Materials:

Text: “Essentials of General Chemistry” (2nd Ed., 2006) by Ebbing, Gammon, and Ragsdale

“Student Solutions Manual for Essentials of General Chemistry” by David Bookin.

Lab: Laboratory Manual for Chemistry *111-112* by Michael Tessmer.

Safety goggles are required for lab work.

Grading Policies and Assignments:

There will be approximately 520 points for the term with grades based on the following scale. The instructor may curve this in a downward manner if necessary.

93-100 %	A	73-76 %	C
90-92 %	A-	70-72 %	C-
87-89 %	B+	67-69 %	D+
83-86 %	B	63-66 %	D
80-82 %	B-	60-62 %	D-
77-79 %	C+	≤ 59 %	F

Course grades will be calculated from the following assignments.

- A) **TV Mobile Quizzes: 60 points** A short multiple choice quiz will be posted on TV Mobile every other week. Each quiz will be worth 10 points and your lowest quiz (or a missed quiz) will be dropped.
- B) **In-class quizzes: 240 points** Seven 40 point **quizzes** that are multiple choice, short answer, and problem solving will be given with the lowest score dropped. Make-up quizzes will be given only due to a **required** school event or valid emergency and you contact me in advance. The in-class quizzes are every other week.
- C) Comprehensive **final exam – 100 points**
You will receive a study guide for the final exam.
- D) **Laboratory** portion of the course – **120 points**

Academic Integrity:

Everyone knows what constitutes cheating and you are expected to follow the rules and regulations set forth in the current Student Handbook.

Recommended Problems from the Textbook:

These problems are at the end of each chapter in your book. They are carefully chosen!

CIRCLE THESE PROBLEMS IN YOUR BOOK YOU SHOULD ATTEMPT ALL OF THESE PROBLEMS

Chapter 1: 2, 4-7, 9, 11, 13, 14, 16, 18, 19, 23-35 odd, 39, 41, 45-57 odd, 61, 63, 75-83 odd

Chapter 2 (Sections 2.1-2.5): 1, 2, 5, 9, 21, 23, 25, 26, 27, 29, 31, 33, 35, 63, 69

Chapter 8: 3-9, 11, 12,, 15, 21, 22, 26a-b, 27, 29, 31, 33-35, 37-49 odd, 53, 55

Chapter 2 (Sections 2.6-2.10): 10, 13, 15-20, 37-45 odd, 47 c-d, 49, 53-61 odd, 65, 73, 75, 79, 81, 83

Chapter 3: 3, 5, 6-13, 15, 16a, 17-43 odd, 47-65 odd, 69, 71, 73, 77, 79

Chapter 4: 2, 3, 5, 7, 9, 11, 14, 15, 17, 19, 21, 25a-b, 27a-b, 31-47 odd, 59, 61, 65, 67, 79, 85

Chapter 5: 4-9, 11, 15-18, 21, 25, 27, 29, 33, 35, 39, 41, 43, 45, 47, 49, 51, 53, 54, 63, 65, 67, 73, 75, 79

Chapter 6: 1, 2, 4-9, 11, 13-15, 17-19, 22, 27, 29, 31, 33, 35, 37, 38, 43-45, 47, 49, 51, 55, 57, 59, 65, 67, 69, 75

Chapter 9: 4-6, 9-10, 15, 17-23, 25, 27, 29, 31, 33-35, 37-55 odd, 59, 61, 63, 65, 67, 71, 73

Chapter 10: 2, 4-8, 13-17, 19, 21, 23, 25, 29, 31, 33, 37, 39, 41, 47, 49, 51

Chapter 11: 1, 3-5, 7, 9, 16, 20a, 21, 23, 25, 33, 34, 37, 39, 41, 43, 44, 65, 76, 79

Chapter 12: 1, 3-4, 6-15, 19, 21, 23, 25, 26, 27, 29, 31, 33, 35, 39, 41, 43, 45, 49, 51a-b, 53, 54, 55, 57, 65

Lecture and Quiz Schedule

TOPIC	Readings
Course Intro. and Measurement	Chapter 1
Atoms and Isotopes	Chapter 2 (2.1-2.5)
Quiz 1 and Start Atomic Structure	
Atomic Structure and Periodicity	Chapter 8
Naming Compounds	Chapter 2 (2.6-2.10)
Quiz 2 and Start Ch 3.	Chapter 3
Chemical Reaction Quantities	Chapter 3
Quiz 3 and Start Reactions	Chapter 4
Types of Chemical Reactions	Chapter 4
Gases	Chapter 5
Quiz 4 and Gases	Chapter 5
The Gaseous State	Chapter 5
Thermochemistry	Chapter 6
Quiz 5 and Thermochemistry	Chapter 6
Finish Thermochemistry	Chapter 6
Ionic and Covalent Bonding	Chapter 9
Quiz 6 and Start Geometry	Chapter 9/10
Molecular Geometry	Chapter 10
Liquids and Solids	Chapter 11
Quiz 7 and Liquids and Solids	Chapter 11
Solutions	Chapter 12
Review for Final	

Disability Clause

If you have any condition or situation that you feel prevents you from doing your best work in this course, it is your responsibility to bring that condition or situation to the attention of the teacher or the Division Head. It is important that we are informed early in the term so that we can make appropriate arrangements for assistance.