



CITY ON A HILL
Classical Christian Education

Class Chemistry II – Spring 2025

Class Length 70 Minutes

Teacher Mr. Jon S. Szabo

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Class Description: This class covers the second half of the Plourde chemistry textbook (see Curriculum/Tools below) engaging chemical equations with various laws of physics.

Grades/Ages: This class is designed for students in the 10th, 11th, and 12th grades.

Responsibilities

- **Parent Responsibility:** To establish and oversee an educational plan for the student. And, to grade and review the progress of the student. *In the Grammar stage this is a daily activity for each subject. In the Logic and Rhetoric stages this can become a weekly activity.*
- **Student Responsibility:** To actively engage with the teaching and study work. To respect the instructions and expectations of Dad and Mom. And, to come prepared to each CO-OP class.
- **Teacher-Tutor Responsibility:** To support (bolster) the educational plan of the parent. To offer passionate and accurate teaching/tutoring of the subject matter. And, to challenge the student in the subject.

Curriculum/Tools for Learning: Please purchase the following resources:

- *Exploring Creation with Chemistry (3rd Edition) – Kristy Plourde (Publisher: Apologia) ISBN 978-1-940110-25-7.* For utilizing an older or a newer addition, email Teacher your edition number and send photo of Table of Contents to see if it can be used.
- Pens, pencils, and notebook. Also, purchase of safety goggles and disposable gloves. The purchase of a microscope may be necessary, unless we share one in class. For at-home experiments, students may need certain household supplies (e.g., stove burner, kitchen gram scale, metric ruler) with parent's permission. For a complete list of lab supplies possibly needed, see Appendix C at the back of Plourde textbook.
- Use of a computer (Word, Excel) may be needed for some assignments.

Grading Rubric: As a reminder, although the teacher-tutor will provide each student/parent with a midsemester progress report and an end of semester progress report, it is the responsibility of the student's parents to determine the final grade for the student. The progress report provided by the teacher-tutor is meant to be a reflection of the work accomplished within the scope of the class and therefore NOT a reflection of the student's overall progress.

- Attendance & Participation: 10 %
Students are expected to attend and engage with the class discussion.
- Homework & Lab Notes: 10 %
A log that records "On Your Own" problems completed and additional lab work notes (strive for about one student-selected lab experiment for every module completed -see Plourde textbook and the "After Class Assignments" column on next page). We will complete as many lab experiments in class as time allows; other labs completed at home.
- Quizzes: 20 %
Helps prepare the student for upcoming tests; takes up one-third of class hour.
- Tests: 45 %
Each test is long enough to take one whole class hour to complete.
- Science Paper: 15 %
Near the end of the semester, students present their findings on one aspect of chemistry previously covered in class.

Classroom Behavior/Etiquette (Code of Conduct)

Although not all participants of City on a Hill activities confess Christ, there is still an expectation of the following general guidelines as a code of conduct.

Love God and Love Others (Romans 13:8-10) - The Law of God directs our steps. The two greatest commands direct all that we do (Matthew 22:36:40). The 10 Commands clearly explain the moral law written on everyone's heart (Deuteronomy 20:3-17).

Respect Authority (Romans 13:1-5) - In words, actions, behavior, attitudes, and in secret.

Order of Authority: 1. God 2. Parents 3. *Teacher-Tutors* 4. Students

Dress and Speak like Men/Women - What we wear and what we say should speak of maturity.

Diligence in our Work, Play, and Rest - We are to do well in whatever we find ourselves doing.

Meeting Dates and Content – Chemistry II Spring 2025

Date	Week	Class Topic <i>Come prepared for (i.e., read, practice, memorize):</i>	Homework <i>Complete after class</i>
Jan-14	1	Module 9 (Acid-Base Chemistry – Part I) pp. 313-329a *	“On Your Own” problems 9.1-9.6
Jan-21	2	Module 9 (Acid-Base Chemistry – Part II) pp. 329b-341 * Module 10 (The Chemistry of Solutions – Part I) pp. 349-360a *	“On Your Own” problems 9.7-9.10 “On Your Own” problems 10.1-10.3
Jan-28	3	Module 10 (The Chemistry of Solutions – Part II) pp. 360b-374 *	“On Your Own” problems 10.4-10.10
Feb-4	4	Quiz 1 covering Modules 9 through 10 and Labs ____ & ____	Organize Labs & Notes from the past Modules 9 through 10
Feb-11	5	Module 11 (The Gas Phase – Part I) pp. 382-402a *	“On Your Own” problems 11.1-11.7
Feb-18	6	Module 11 (The Gas Phase – Part II) pp. 402b-410 * Module 12 (Energy, Heat, and Temperature - Part I) pp. 418-430	“On Your Own” problems 11.8-11.10 “On Your Own” problems 12.1-12.2
Feb-25	7	Module 12 (Energy, Heat, and Temperature - Part II) pp. 431-440	“On Your Own” problems 12.3-12.7
Mar-4	BREAK		
Mar-11	8	Quiz 2 covering Modules 11 through 12 and Labs ____ & ____	Organize Labs & Notes from the past Modules 11 through 12
Mar-18	9	Module 13 (Thermodynamics – Part I) pp. 448-474a *	“On Your Own” problems 13.1-13.9
Mar-25	10	TEST 1 covering Modules 9 through Module 13 (Part I)	Basic outline and structure of Science Paper should be complete
Apr-1	11	Module 13 (Thermodynamics – Part II) pp. 474b-481 * Module 14 (Kinetics) pp. 492-517	“On Your Own” problems 13.10-13.12 “On Your Own” problem 14.1-14.11
Apr-8	12	Module 15 (Chemical Equilibrium – Part I) pp. 524-543a *	“On Your Own” problems 15.1-15.9 Rehearse your Presentation
Apr-15	13	Student In-Class Presentations on Science Paper	Make any revisions to Paper from teacher’s review of your experiment
Apr-22	14	Quiz 3 covering Modules 13 (Part II) through 15 (Part I) and Labs ____ & ____	Organize Labs & Notes from the past Modules 13 through 15
Apr-29	BREAK		
May-6	15	Module 15 (Chemical Equilibrium – Part II) pp. 543b-552 * Module 16 (Reduction-Oxidation Reactions) pp. 559-582	“On Your Own” problem 15.10-15.13 “On Your Own” problems 16.1-16.7
May-13	16	TEST 2 covering Modules 13 (Part II) through 16 Submit Written Completed Science Paper	

* Page suffix “a” (or “b”) refers to the last (or first) portion of page of assigned reading, typically stopping at a given “On Your Own” breakpoint of the given module or chapter. Certain modules will take more time to understand.

11-Jan	New Student Orientation
14-Jan	
11-Mar	Parent Training Classes
13-May	
11-Mar	Science Fair
29-Mar	Music Recital

NOTE:

- All CO-OP classes and projects are a supplement, NOT a replacement of the education taking place at home.
- Parents are required to review any work to be turned in before class. Parents, please initial any work to be turned in.

Reading and Assignment Acknowledgement

We, (parents and student), have read this syllabus and understand the requirements for the following classes.

Please use one signature sheet per student for all classes:

Class: _____

Class: _____

Class: _____

Class: _____

Class: _____

Parent

Date

Parent

Date

Student

Date