



IB CHEMISTRY HL Year 1 2021-2022  
CANYON DEL ORO HIGH SCHOOL  
Jill Christman

### ***Introduction***

IB Chemistry Higher Level (HL) is a rigorous course designed to provide students with a solid background in the science of chemistry. A major aim of the course will be to provide students with ample opportunities to develop strong laboratory techniques and analysis skills. This course is designed to prepare students for the IB Chemistry HL exam given in May 2022. Students should be prepared to set aside ample study time for this course each week. There will be no shortcut to success. This is likely to be one of the most difficult exams you will take. You will need to study, study, study!

### ***ASSIGNMENTS AND ACTIVITIES***

I am committed to presenting the information in this course in an interesting and varied way. Due to the large amount of content which will be covered, the course will again utilize screencasts to deliver instruction. In addition, students will complete a laboratory experiment approximately once every other week. Other shorter labs, demos, and hands-on activities will be integrated into the class periods. Emphasis will be placed on critical thinking, problem solving, and inquiry in classroom assignments. Regular assignments will include chapter vocabulary, completing study questions, solving a variety of problems, completing informal lab analyses, and writing formal lab reports.

### ***Textbooks and Required Materials***

- Scientific Calculator
- 3 Composition Books – Large
- Index Cards
- Brown, Catrin & Ford, Mike. *Higher Level Chemistry for the IB Diploma*. Pearson Education, 2015

### ***Course Topics***

#### ***Year 1***

- **Topic 11:** Chemical Safety, Measurement and Data Processing
- **Topic 1:** Stoichiometric Relationships
- **Topic 2/12:** Atomic Structure
- **Topic 3/12:** Periodicity
- **Topic 4/14:** Chemical Bonding and Structure
- **Topic 10/20:** Organic Chemistry

#### ***Year 2***

- **Topic 5/15:** Energetics and Thermochemistry
- **Topic 7/17:** Equilibrium
- **Topic 8/18:** Acids and Bases
- **Topic 9/19:** Oxidation Reduction
- **Topic 10/20:** Organic Chemistry
- **Topic 11/21:** Chemical Safety, Measurement and Data Processing, Spectroscopic Analysis
- **Option D:** Medicinal Chemistry

### ***Teaching Approach***

IB Chemistry is a Flipped Classroom. A flipped classroom is a pedagogical model in which the typical lecture and homework elements of a course are reversed. Short screencast lectures and reading assignments are completed by students at home before the class session, while in-class time is devoted to problem solving, discussions, and labs. The value of a flipped class is in the repurposing of class time into a workshop where students can inquire about screencast content, test their skills in applying knowledge, and interact with one another in hands-on activities. During class sessions, instructors function as coaches or advisors, encouraging students in individual inquiry and collaborative effort. I believe in the growth of all my students. I believe that ability can change as a result of effort, perseverance, and practice. I see mistakes as a way to learn and I want my students to embrace challenges and persist if they have a setback. With this mindset, students can have reach higher levels of achievement both in the course and on the IB Exam.

## ***Taking Notes***

Screencasts will be watch in an app called Edpuzzle. I will be going over how to access the screencasts in class. The app will record if you watch the screencast. In addition there will be comprehension questions that are required which are embedded in the videos. Each screencast is less than 15 minutes. Watching the screencast is mandatory and is recorded as a grade for the class. Missing a screencast is equivalent to missing a class. You must take comprehensive notes and record any questions you have so you can ask them the next day in class.

## ***Labs***

Students communicate and collaborate in lab groups, however each student must write a laboratory report in a lab notebook for every lab they perform. Pre Labs and Post lab quizzes will be part of the curriculum to ensure lab understanding. Your exemplary behavior and observance of safety procedures is required at all times. Laboratory safety is always of paramount importance.

## ***Academic Integrity***

Cheating will not be tolerated in this class. Disciplinary action will be carried out in accordance to the Student Handbook.

## ***Assessment***

The course will be assessed in three areas.

(i) **Topic Exams and Quizzes** Students will be taking an exam at the completion of each topic of study. We will frequently be reviewing previous topics on these exams. Students who complete ALL assigned work prior to the exam, earn the option to complete corrections on the exam to improve their grade, more on this policy in a separate document. Each Friday students will be taking a quiz over the current week's material; quizzes may be retaken in tutorial until the next quiz. The test and quizzes will make up 35% of the final semester grade. 15% will be the Final Exam.

(ii) **Laboratory;** There are several labs recommended for IB Chemistry. In addition to completing the lab and

writing a lab report students are required to keep a lab notebook to take with them to college. The labs will make up 25% of the final semester grade.

(iii) **Other Assignments:** (25 % of Final Semester Grade)

- **Problem Sets** - Problem sets will be turned in and graded individually into Classkick
- **Screencasts** – will be assigned daily and will be completed in the Edpuzzle application
- **Pogil** – Collaborative group work, may be both in and out of class
- **Daily Warmup** – Turned in every two weeks

## **Late Work**

Assignments are due AT THE BEGINNING OF THE CLASS unless otherwise stated. If you are absent homework must be submitted AT THE BEGINNING OF CLASS on the NEXT DAY you are in school. Work submitted late will be assessed a 5% per day late penalty, with a maximum deduction of 50%.

Daily work that is completed ON TIME in classkick can be resubmitted for grading up until the exam for full credit.

## ***Grading Scale***

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

## ***The IB Grade***

At the end of the year, each student will receive a score (between 1 and 7) in IB Chemistry from the IB organization. This score will be the combined total of "External Assessment (EA)" (a test, consisting of three parts, and making up the majority of the student's grade) and the "Internal Assessment (IA)" (lab work scored by the teacher and reviewed by the IBO, making up the remaining portion of the grade).

## ***Contact Me***

The best way to contact me is via email at [jchristm@amphi.com](mailto:jchristm@amphi.com)

**Syllabus Signature Required!!**

Students: Please read the course syllabus and share it with your parents. Then you and your parents should sign this sheet. Please detach below and return by Monday August 9, 2021

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I have read the policies and expectations for Mrs. Christman's IB Chemistry class and understand them.

Student Printed Name: \_\_\_\_\_

Parent/Guardian Printed Name: \_\_\_\_\_

Student Signature: \_\_\_\_\_

Parent/Guardian Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

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Parent/Guardian email: \_\_\_\_\_