IB Chemistry SL

Mr. Zahorodny (Mr. Z) Room 426 New Science

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**Textbook**: Chemistry for use with the IB Diploma 3rd Edition, IBID Press, 2008

**Course Description**: IB Chemistry SL is an academically challenging program that prepares students for success in college and 21st century life. This course will cover a broad range of topics from basic mole concept through organic chemistry. Completion and analysis of laboratory experiments are major components of the SL course of study. Students will become aware of how scientists work and be given many opportunities for scientific study through laboratory work.

**Materials**- 1, 3 subject notebook **Grading:**  Tests= 50%

-Scientific Calculator Labs= 25%

Quizzes/Classwork= 25%

**Test Days**: Mondays **Before School Tutorials:** Available if you contact me beforehand. Otherwise the building opens at 8:30

**Grimsley High School AP/IB Diploma Programme Expectations**

AP and IB classes are college level classes in a high school setting; they should not be mistaken for high school level classes.  Students choosing to take AP/IB classes are looking for a challenge that they are not necessarily getting from Honors level courses.  The expectations are higher and the work load is greater.  Additionally, students are expected to complete all components of assessment for AP and IB evaluation, including IB Internal and External Assessments, IB exams, and AP exams.  Students who do not meet this requirement will have to pay a portion of the examination fee: $15 for AP exams and $45 for IB exams.  Please note that oversleeping, forgetting about an exam, getting in traffic delays, and feeling ill without a doctor’s note are not accepted reasons for missing an exam or taking a late exam.

A student can expect their homework to take an average of 30 minutes to 1 hour, per class, to complete. Some classes have the regular homework of studying the material discussed in class and the time required for such homework will depend on the student.  Generally, AP and IB students should expect more: more learning, more work, more writing, more challenges, and more from themselves

Late Policy

First day late = 15 points off

Second day late= 10 more points off

Third day and subsequent days late= 10 more points off

After 10 days, the missing assignment will be scored as a zero.

Academic Honesty

Instances of academic malpractice will be taken very seriously. Malpractice includes the following:

a. Plagiarism

b. Collusion

c. Duplication of work

d. Any other behavior that gains an unfair advantage for a candidate or that affects the results of another candidate

If a teacher discovers evidence of student malpractice, they will first discuss the issue with the student.  If evidence of malpractice is found, the following will occur:

First Offense:

1) The parent will be contacted, and a formal administrative write-up will occur.  This write-up will serve as warning and will remain on file as documentation if any other instances of malpractice occur.

2) The teacher, parent, and student will discuss the seriousness of malpractice and the resulting effect on the class grade.  If the student is an IB student (either in Grimsley’s Diploma Programme or as a Grimsley Pre-IB student), the IB Coordinator will be notified and the malpractice will be placed in the student’s file.

3) The student earns a 0 class grade for the assignment.

Second Offense:

1) The parent will be contacted, and a formal administrative write-up will occur.  This write-up will result in disciplinary action.

2) The teacher will notify the IB Coordinator, if applicable. The IB Coordinator will contact the student and his/her parents and decide if the student will be allowed to continue in the IB Diploma Programme at Grimsley High School.

**Course Outline**

This course will cover eleven topics and one option. Topics are listed below. The option covered this year will be biochemistry, but students may study an addition option on their own.

Class Notebooks- Class notes, homework, and labs will be completed in the notebook. There will be a homework assignment for every page of notes given. Homework assignments are due the following day and may be checked for completion but will only be graded for accuracy when notebooks are collected on test day. You must be present in class to receive a completion check. All notes and assignments will be posted on managebac and/or [www.zbiology.weebly.com](http://www.zbiology.weebly.com) so that absent students may keep up with the pace of the class.

Internal Assessment (IA)- Students will design and execute, a 10- hour experiment termed an individual investigation. This assignment is mandatory and counts as 1/5th of your IB exam score. The lab will be assessed based on five criteria: personal engagement, exploration, analysis, evaluation, and communication. The IB mandated scoring rubric will be used to score the lab. In addition to counting toward the IB exam score, students will receive a 3Q test grade for the assignment. Labs will be due around March 22nd (a firm due date will be set closer to that time).

Group 4 project- IB Chemistry SL is an experimental science along with IB Biology. Students in these courses are required to complete the group 4 Project. Groups will consist of chemistry and biology students. Students will be allowed 10 hours to work on the group 4 project. This is a mandatory assignment. The group 4 project will count as a lab grade.

Tests- Tests will occur at least every other unit. All tests will have a small set of cumulative multiple choice questions followed by unit-specific short answer questions.

External Assessment- The external assessment is the exam that IB Chemistry students take on **MAY 15th & 18th**. It consists of 3 parts:

Day 1 **-Paper 1**= 30 multiple choice questions covering the core topics

Day 1 **- Paper 2**= short answer and extended response questions on core material

Day 2 **- Paper 3**= data based question, short answer questions based on experimental work, short and extended response questions covering the option topic covered

**IB Biology Topics and Options**

(This is not necessarily the order in which topics will be covered)

|  |  |
| --- | --- |
| Topic |  |
| Lab Skills/Statistical Analysis |  |
| #1 Stoichiometrical relationships | 1.1 Introduction to matter  1.2 The mole concept  1.3 Reacting masses and volumes |
| #2 Atomic structure | 2.1 The nuclear atom  2.2 Electron configuration |
| #3Periodicity | 3.1 Periodic table  3.2 Periodic trends |
| #4 Chemical bonding and structure | 4.1 Ionic bonding and structure  4.2 Covalent bonding  4.3 Covalent structures  4.4 Intermolecular forces  4.5 Metallic bonding |
| #5 Energetics/thermochemistry | 5.1 Measuring energy changes  5.2 Hess’s Law  5.3 Bond enthalpies |
| #6 Chemical kinetics | 6.1 Collision theory and rates of reaction |
| #7 Equilibrium | 7.1 Equilibrium |
| #8 Acids and bases | 8.1 Theories of acids and bases  8.2 Properties of acids and bases  8.3 The pH scale  8.4 Strong/weak acids and bases  8.5 Acid deposition |
| #9 Redox processes | 9.1 Oxidation and reduction  9.2 Electrochemical cells |
| #10 Organic chemistry | 10.1 Fundamentals of organic chemistry  10.2 Functional group chemistry |
| #11 Measurement and data processing | 11.1 Uncertainties and errors  11.2 Graphical techniques  11.3 Spectroscopic identification of organic compounds |
| Option A: Materials  **Option B: Biochemistry**  Option C: Energy  Option D: Medicinal chemistry | B.1 Proteins/enzymes  B.2 Lipids  B.3 Carbohydrates  B.4 Vitamins  B.5 Environmental biochemistry |

**Final Exam**= IB students are required to take a Final Exam that is worth 20% of their final grade in the course. This exam will occur at the end of April.

**Classroom Guidelines-**

* Be on time and prepared for class.
* Cell Phones are not allowed during class time.
* Be respectful of your fellow classmates and other adults. Never talk while I am talking.
* Follow all safety procedures in the laboratory setting.

**Tardiness** will not be tolerated. The school tardy policy will be strictly enforced. You are considered tardy if you are not in the classroom when the bell rings.

**Cell Phone** use is not allowed during class. If you use your phone or your phone is seen during class, you will be referred to administration**. Students may not use classroom outlets to charge their phones.**

**Lab Safety-** Lab safety training will be held during class during the first week of school. Read and sign the safety contract that is attached. Return this form with the student/ parent acknowledgement form.

**Grimsley Senior High IB Chemistry SL**

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Student Name (printed) Parent Name (printed)

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Student Signature Parent Signature

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Parent **phone** contact

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Parent **email** contact

I prefer to be contacted by: □ phone □ email

Please check one

**Grimsley XC – Together in Education**

As assistant cross country, indoor track, and outdoor track coach, I am always looking for ways to improve the programs so that our student athletes can experience greater success. One way we raise money is through the Together in Education program that Harris Teeter runs. By signing up for our account, the Grimsley cross country and track teams will receive a portion of the sales every time you purchase **Harris Teeter brand items** using your VIC card. It does not cost anything to join…. Harris Teeter is simply sharing their profits with our program. If you already support other Together in Education programs, you may still sign up to contribute to our teams. Harris Teeter will split your purchases among up to five schools or programs. You may sign up for our program by telling your Harris Teeter cashier that you would like program **5283** (our code) linked to your VIC card. The program does reset every August so you would have to do this once each year…OR… you may provide either your VIC card number or the associated phone number along with the last name that is on the account and I can automatically link your VIC card year after year so that you never have to think about it… remember this is a free way to support our Grimsley Whirlies. Thank you for your support!

VIC card number OR phone number \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Last name on account \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Please link my VIC card to Grimsley XC/Track for this year only

Please link my VIC card to Grimsley XC/Track continuously each year