



Stony Point High School
 IB Diploma Programme
 Course Syllabus
 IB Chemistry SL/HL
 Mr. Brad Calvin (B208)
 brad_calvin@roundrockisd.org



Tutorials: Daily before school (8:15-8:45am) and by appointment

“Chemistry is an experimental science that combines academic study with the acquisition of practical and investigational skills. It is often called the central science, as chemical principles underpin both the physical environment in which we live and all biological systems. Apart from being a subject worthy of study in its own right, chemistry is a prerequisite for many other courses in higher education, such as medicine, biological science and environmental science, and serves as useful preparation for employment.” - IB Chemistry Diploma Program Guide, First Assessment 2016

I. Course Description:

The first year of this course is a laboratory-oriented, college freshman-level chemistry course of theoretical chemistry concepts. Laboratory experiments emphasize student analysis of laboratory data and documented reports. This second year of this course is a lab-oriented study of organic chemistry including nomenclature, isomerism, substitution and elimination, alcohols, ethers, spectroscopy, alkenes, atomic compounds, organic acids, and biochemistry.

II. Prior Learning:

Chemistry

It is expected that students enrolled in IB Chemistry SL/HL have completed coursework in biology and chemistry, as well as already having completed or being currently enrolled in algebra. Students in IB Chemistry HL are expected to know the material from the SL year and should be prepared for only a brief review before moving on to new material. Additionally, IB Chemistry students should be comfortable with the following mathematical concepts:

- perform the basic arithmetic functions: addition, subtraction, multiplication and division
- carry out calculations involving means, decimals, fractions, percentages, ratios, approximations and reciprocals
- carry out manipulations with logarithmic and exponential functions (HL only)
- use scientific notation (for example, 3.6×10^6)
- use direct and inverse proportion
- solve simple algebraic equations
- plot graphs (with suitable scales and axes) including two variables that show linear and non-linear relationships
- interpret graphs, including the significance of slopes and changes in slopes

III. Course Aims & Objectives:

The aims for Group 4 (The Sciences) enable students, through the overarching theme of the Nature of science, to:

1. appreciate scientific study and creativity within a global context through stimulating and challenging opportunities
2. acquire a body of knowledge, methods and techniques that characterize science and technology
3. apply and use a body of knowledge, methods and techniques that characterize science and technology

4. develop an ability to analyse, evaluate and synthesize scientific information
5. develop a critical awareness of the need for, and the value of, effective collaboration and communication during scientific activities
6. develop experimental and investigative scientific skills including the use of current technologies
7. develop and apply 21st-century communication skills in the study of science
8. become critically aware, as global citizens, of the ethical implications of using science and technology
9. develop an appreciation of the possibilities and limitations of science and technology
10. develop an understanding of the relationships between scientific disciplines and their influence on other areas of knowledge.

The assessment objectives for biology, chemistry and physics reflect those parts of the aims that will be formally assessed either internally or externally. These assessments will centre upon the nature of science. It is the intention of these courses that students are able to fulfill the following assessment objectives:

1. Demonstrate knowledge and understanding of:
 - a. facts, concepts and terminology
 - b. methodologies and techniques
 - c. communicating scientific information.
2. Apply:
 - a. facts, concepts and terminology
 - b. methodologies and techniques
 - c. methods of communicating scientific information.
3. Formulate, analyse and evaluate:
 - a. hypotheses, research questions and predictions
 - b. methodologies and techniques
 - c. primary and secondary data
 - d. scientific explanations.
4. Demonstrate the appropriate research, experimental, and personal skills necessary to carry out insightful and ethical investigations.

IV : How the Course will Address Theory of Knowledge (TOK)

Connections will be made throughout the course to theory of knowledge questions. These will be addressed through class discussions, current events, and other projects. TOK in chemistry focuses heavily on evolving models of understanding, the economics of scale, and the nature of scientific research.

V: How the Course will Address CAS (Creativity, Action, Service)

The emphasis in CAS is on helping students to develop their own identities, in accordance with the ethical principles embodied in the IB mission statement and learner profile. It involves students in a range of activities alongside their academic studies throughout the Diploma Programme. The three strands of CAS are Creativity (arts, and other experiences that involve creative thinking), Action (physical exertion contributing to a healthy lifestyle) and Service (an unpaid and voluntary exchange that has a learning benefit for the student). CAS opportunities in Chemistry are often related to educational outreach or helping other students learn (e.g., tutoring underclassmen in Chemistry).

VI: How the Course will Address Approaches to Learning

Laboratory activities allow students to interact directly with natural phenomena and secondary data sources. These experiences provide the students with the opportunity to design investigations, collect data, develop manipulative skills, analyse results, collaborate with peers and evaluate and communicate their findings. Experiments are used to introduce topics, investigate phenomena or allow students to examine questions. Experimentation allows students to

experience the nature of scientific thought and investigation. All scientific theories and laws begin with observations. It is important that students are involved in an inquiry-based practical programme that allows for the development of scientific inquiry.

VII. Approaches to Teaching this Course

We will teach the course using the approaches to teaching dictated by the IB. This means that the course will be: based on inquiry, focused on conceptual understanding, developed in local and global contexts, focused on effective teamwork and collaboration, differentiated to meet the needs of all learners, and informed by formative and summative assessment.

VIII: How the Course will Address the Learner Profile

The chemistry course is closely linked to the IB learner profile. By following the course, students will have engaged with the attributes of the IB learner profile. For example, the requirements of the internal assessment provide opportunities for students to develop every aspect of the profile. For each attribute of the learner profile, a number of references from the Group 4 courses are given below.

| | |
|---------------|---|
| LP attribute | Biology, Chemistry and Physics |
| Inquirers | Aims 2 and 6 Practical work and internal assessment |
| Knowledgeable | Aims 1 and 10, international-mindedness links Practical work and internal assessment |
| Thinkers | Aims 3 and 4, theory of knowledge links Practical work and internal assessment |
| Communicators | Aims 5 and 7, external assessment Practical work and internal assessment, the group 4 project |
| Principled | Aims 8 and 9 Practical work and internal assessment, ethical behaviour/practice(<i>Ethical practice</i> poster, <i>Animal experimentation policy</i>), academic honesty |
| Open-minded | Aims 8 and 9, international-mindedness links Practical work and internal assessment, the group 4 project |
| Caring | Aims 8 and 9 Practical work and internal assessment, the group 4 project, ethical behaviour/practice(<i>Ethical practice</i> poster, <i>Animal experimentation policy</i>) |
| Risk-takers | Aims 1 and 6 Practical work and internal assessment, the group 4 project |
| Balanced | Aims 8 and 10 Practical work and internal assessment, the group 4 project and field work |
| Reflective | Aims 5 and 9 ;Practical work and internal assessment, the group 4 project |

IX: Internal and External Assessments

Internal Assessment: 20%

The internal assessment will not be included in the class grade as it is graded by an external marker. The IA will be assessed in the categories of: Personal Engagement (8%), Exploration (25%), Analysis (25%), Evaluation (25%), and Communication (17%).

Labs and Practicals completed throughout the year will prepare students for the IA, and will be graded using the same mark scheme so that students become comfortable with the expectations.

Purpose: Internal assessment is an integral part of the course and is compulsory for both SL and HL students. It enables students the internal assessment should, as far as possible, be woven into normal classroom teaching and to demonstrate the application of their skills and knowledge, and to pursue their personal interests, without the time limitations and other constraints that are associated with written examinations. That be a separate activity conducted after a course has been taught. The internal assessment requirements at SL and at HL are the same.

General Introduction: The internal assessment requirements are the same for biology, chemistry and physics. The internal assessment, worth 20% of the final assessment, consists of a scientific investigation which should reflect the level of the course of study. Student work is internally assessed by the teacher and externally moderated by the IB. The IA is marked against common assessment criteria, with a total mark out of 24. The scientific investigation should take about 10 hours and the write-up should be about 6 to 12 pages long. Investigations exceeding this length may be penalized in the communications criterion as lacking in conciseness.

The practical investigation, with generic criteria, will allow a wide range of practical activities satisfying the varying needs of biology, chemistry and physics. The investigation addresses many of the learner profile attributes well. See section on “Approaches to the teaching and learning of physics” for further links.

The task produced should be complex and commensurate with the level of the course. It should require a purposeful research question and the scientific rationale for it. The marked exemplar material in the teacher support materials will demonstrate that the assessment will be rigorous and of the same standard as the assessment in the previous courses.

Some of the possible tasks include:

- a hands-on laboratory investigation
- using a spreadsheet for analysis and modelling
- extracting data from a database and analysing it graphically
- producing a hybrid of spreadsheet/database work with a traditional hands-on investigation
- using a simulation, provided it is interactive and open-ended

Some task may consist of relevant and appropriate qualitative work combined with quantitative work.

The tasks include the traditional hands-on practical investigations as in the previous course. The depth of treatment required for hands-on practical investigations is unchanged from the previous internal assessment and will be shown in detail in the teacher support materials. In addition, detailed assessment of specific aspects of hands-on practical work will be assessed in the written papers as detailed in the relevant topic(s) in the “Syllabus content” section of the guide.

The task will have the same assessment criteria for SL and HL. The five assessment criteria are personal engagement, exploration, analysis, evaluation and communication.

Internal Assessment Criteria: The new assessment model uses five criteria to assess the final report of the individual investigation with the following raw marks and weightings assigned:

| Personal engagement | Exploration | Analysis | Evaluation | Communication | Total |
|---------------------|-------------|----------|------------|---------------|-----------|
| 2 (8%) | 6 (25%) | 6 (25%) | 6 (25%) | 4 (17%) | 24 (100%) |

Levels of performance are described using multiple indicators per level. In many cases the indicators occur together in a specific level, but not always. Also, not all indicators are always present. This means that a candidate can demonstrate performances that fit into different levels.

Personal Engagement: This criterion assesses the extent to which the student engages with the exploration and makes it their own. Personal engagement may be recognized in different attributes and skills. These could include addressing personal interests or showing evidence of independent thinking, creativity or initiative in the designing, implementation or presentation of the investigation.

| Mark | Descriptor |
|------|--|
| 0 | The student's report does not reach a standard described by the descriptors below. |
| 1 | <p>The evidence of personal engagement with the exploration is limited with little independent thinking, initiative or creativity.</p> <p>The justification given for choosing the research question and/or the topic under investigation does not demonstrate personal significance, interest or curiosity. There is little evidence of personal input and initiative in the designing, implementation or presentation of the investigation.</p> |
| 2 | <p>The evidence of personal engagement with the exploration is clear with significant independent thinking, initiative or creativity.</p> <p>The justification given for choosing the research question and/or the topic under investigation demonstrates personal significance, interest or curiosity. There is evidence of personal input and initiative in the designing, implementation or presentation of the investigation.</p> |

Exploration: This criterion assesses the extent to which the student establishes the scientific context for the work, states a clear and focused research question and uses concepts and techniques appropriate to the Diploma Programme level. Where appropriate, this criterion also assesses awareness of safety, environmental, and ethical considerations.

| Mark | Descriptor |
|------|--|
| 0 | The student's report does not reach a standard described by the descriptors below. |

| | |
|-----|--|
| 1-2 | <p>The topic of the investigation is identified and a research question of some relevance is stated but it is not focused.</p> <p>The background information provided for the investigation is superficial or of limited relevance and does not aid the understanding of the context of the investigation.</p> <p>The methodology of the investigation is only appropriate to address the research question to a very limited extent since it takes into consideration few of the significant factors that may influence the relevance, reliability and sufficiency of the collected data.</p> <p>The report shows evidence of limited awareness of the significant safety, ethical or environmental issues that are relevant to the methodology of the investigation*.</p> |
| 3-4 | <p>The topic of the investigation is identified and a relevant but not fully focused research question is described.</p> <p>The background information provided for the investigation is mainly appropriate and relevant and aids the understanding of the context of the investigation. The methodology of the investigation is mainly appropriate to address the research question but has limitations since it takes into consideration only some of the significant factors that may influence the relevance, reliability and sufficiency of the collected data.</p> <p>The report shows evidence of some awareness of the significant safety, ethical or environmental issues that are relevant to the methodology of the investigation*.</p> |
| 5-6 | <p>The topic of the investigation is identified and a relevant and fully focused research question is clearly described.</p> <p>The background information provided for the investigation is entirely appropriate and relevant and enhances the understanding of the context of the investigation. The methodology of the investigation is highly appropriate to address the research question because it takes into consideration all, or nearly all, of the significant factors that may influence the relevance, reliability and sufficiency of the collected data.</p> <p>The report shows evidence of full awareness of the significant safety, ethical or environmental issues that are relevant to the methodology of the investigation.*</p> |

* This indicator should only be applied when appropriate to the investigation.

Analysis: This criterion assesses the extent to which the student's report provides evidence that the student has selected, recorded, processed and **interpreted** the data in ways that are relevant to the research question and can support a conclusion.

| Mark | Descriptor |
|------|--|
| 0 | The student's report does not reach a standard described by the descriptors below. |
| 1-2 | The report includes insufficient relevant raw data to support a valid conclusion to |

| | |
|-----|---|
| | <p>the research question.</p> <p>Some basic data processing is carried out but is either too inaccurate or too insufficient to lead to a valid conclusion.</p> <p>The report shows evidence of little consideration of the impact of measurement uncertainty on the analysis.</p> <p>The processed data is incorrectly or insufficiently interpreted so that the conclusion is invalid or very incomplete.</p> |
| 3-4 | <p>The report includes relevant but incomplete quantitative and qualitative raw data that could support a simple or partially valid conclusion to the research question.</p> <p>Appropriate and sufficient data processing is carried out that could lead to a broadly valid conclusion but there are significant inaccuracies and inconsistencies in the processing.</p> <p>The report shows evidence of some consideration of the impact of measurement uncertainty on the analysis.</p> <p>The processed data is interpreted so that a broadly valid but incomplete or limited conclusion to the research question can be deduced.</p> |
| 5-6 | <p>The report includes sufficient relevant quantitative and qualitative raw data that could support a detailed and valid conclusion to the research question. Appropriate and sufficient data processing is carried out with the accuracy required to enable a conclusion to the research question to be drawn that is fully consistent with the experimental data.</p> <p>The report shows evidence of full and appropriate consideration of the impact of measurement uncertainty on the analysis.</p> <p>The processed data is correctly interpreted so that a completely valid and detailed conclusion to the research question can be deduced.</p> |

Evaluation: This criterion assesses the extent to which the student's report provides evidence of evaluation of the investigation and the results with regard to the research question and the accepted scientific context.

| Mark | Descriptor |
|------|--|
| 0 | The student's report does not reach a standard described by the descriptors below. |

| | |
|-----|--|
| 1-2 | <p>A conclusion is outlined which is not relevant to the research question or is not supported by the data presented.</p> <p>The conclusion makes superficial comparison to the accepted scientific context. Strengths and weaknesses of the investigation, such as limitations of the data and sources of error, are outlined but are restricted to an account of the practical or procedural issues faced.</p> <p>The student has outlined very few realistic and relevant suggestions for the</p> |
|-----|--|

| | |
|-----|--|
| | improvement and extension of the investigation. |
| 3-4 | <p>A conclusion is described which is relevant to the research question and supported by the data presented.</p> <p>A conclusion is described which makes some relevant comparison to the accepted scientific context.</p> <p>Strengths and weaknesses of the investigation, such as limitations of the data and sources of error, are described and provide evidence of some awareness of the methodological issues* involved in establishing the conclusion.</p> <p>The student has described some realistic and relevant suggestions for the improvement and extension of the investigation.</p> |
| 5-6 | <p>A detailed conclusion is described and justified which is entirely relevant to the research question and fully supported by the data presented.</p> <p>A conclusion is correctly described and justified through relevant comparison to the accepted scientific context.</p> <p>Strengths and weaknesses of the investigation, such as limitations of the data and sources of error, are discussed and provide evidence of a clear understanding of the methodological issues* involved in establishing the conclusion. The student has discussed realistic and relevant suggestions for the improvement and extension of the investigation.</p> |

Communication: This criterion assesses whether the investigation is presented and reported in a way that supports effective communication of the focus, process and outcomes.

| Mark | Descriptor |
|------|--|
| 0 | The student's report does not reach a standard described by the descriptors below. |

| | |
|-----|---|
| 1-2 | <p>The presentation of the investigation is unclear, making it difficult to understand the focus, process and outcomes.</p> <p>The report is not well structured and is unclear: the necessary information on focus, process and outcomes is missing or is presented in an incoherent or disorganized way.</p> <p>The understanding of the focus, process and outcomes of the investigation is obscured by the presence of inappropriate or irrelevant information. There are many errors in the use of subject specific terminology and conventions*.</p> |
| 3-4 | <p>The presentation of the investigation is clear. Any errors do not hamper understanding of the focus, process and outcomes.</p> <p>The report is well structured and clear: the necessary information on focus, process and outcomes is present and presented in a coherent way.</p> |
| | <p>The report is relevant and concise thereby facilitating a ready understanding of the focus, process and outcomes of the investigation.</p> <p>The use of subject-specific terminology and conventions is appropriate and correct. Any errors do not hamper understanding.</p> |

*For example, incorrect/missing labelling of graphs, tables, images; use of units, decimal places.

External Assessments: 80%

There are three exams for both SL and HL students that will be taken in early May (exact dates TBD)

Paper 1: 20% (No calculators) Objectives 1, 2, 3

SL - 45 minutes / 30 Multiple Choice on core material

HL - 1 hour / 40 Multiple Choice on core and AHL material

Paper 2: Calculators Objectives 1, 2, 3

SL (40%) - 1 hour 15 minutes / short answer and extended response on core material. Students will write 1 extended response out of two choices

HL (36%)- 2 hours 15 minutes / short answer and extended response on core and AHL material. Students will write 2 extended responses out of three choices

Paper 3: Calculators Objectives 1, 2, 3 *** NO PAPER 3 MAY 2021

Section A: 2 to 3 questions on experimental skills similar to prescribed labs

Section B: short answer and extended response on 1 option out of 4

SL (20%) - 1 hour

HL (24%) - 1 hour 15 minutes

X: Grading Policy and Scale

Summative Grades: 40% (at least 2 per 6 week period)

ex: Tests, major projects, lab reports

Formative Grades: 60%

ex. Daily work, quizzes, homework, pre-lab activities

****Test Scores:**

Students will be expected to maintain 70 on tests given in class, or to promptly complete test remediation to show their mastery of the material. If the student scores below this level on any two tests in the same grading period, or if they fail to complete test remediation, they will be required to complete tutoring as laid out by an intervention plan developed by some or all of the following: student, teacher, IB coordinator, and parents/guardians.

Homework:

You will be given a variety of homework assignments (textbook reading, online presentations, videos, packets). It is your responsibility to complete these assignments, ensuring that you understand the material. The best way to accomplish this is through note taking.

If you need help understanding any of the homework, come in for tutorials or contact me with any questions. I am here to help you understand the material and work on ways to improve your note taking.

Lab Assignments:

These assignments **must be turned in on time** (*i.e. at the beginning of your class on the due date*). Late labs have an automatic maximum grade of 70%.

Participation in a lab also requires proper attire and your lab notebook. Lack of either of these will result in your inability to participate in the lab.

Some lab activities cannot be made up, but you are still responsible for completing the lab questions or write-up. If you are absent on a lab day, you are expected to come see me so I can direct you where to get the lab data from in order to complete the lab and turn it in on the assigned day.

Tests:

It is important that you keep up with your assignments and work on studying a little bit each day. There is too much information for you to try to “cram” all of your studying into a few hours before a test. You will be more likely to retain information if you review and study your notes and textbook a little every day!

- Tests are composed of IB exam questions and IB style exam questions.
- Tests will be time limited just as it is on the IB exam and MC and FRQ will be timed separately
- Test questions will be based on class notes, assignments, labs, and your textbook. We may or may not directly cover every single item on a test. It is your responsibility to carefully complete assignments, assigned readings and video notes.
- After a test is graded and discussed in class, students are welcome to make arrangements to look at their test mistakes in greater detail. Tests will not be released to students.
- If you are absent on the day of a test, you are expected to see me about a make-up date, the day you return to class.

XI: Course Sequence

The following is a brief overview of what will be taught in IB Chemistry SL and HL years. A more detailed agenda will be available on your teacher's website.

| IB Chemistry SL/HL Year 1 | | IB Chemistry HL Year 2 | |
|---|--|--|---|
| Fall | Spring | Fall | Spring |
| <ul style="list-style-type: none"> ● Topic 11: Measurement and Data Processing ● Topic 1: Stoichiometric Relationships ● Topic 5: Energetics and Thermochemistry ● Topic 6: Chemical Kinetics ● Topic 7: Equilibrium ● Topic 8: Acids and Bases ● Topic 9: Redox Processes Fall Semester Exam | <ul style="list-style-type: none"> ● Completion of the IA (Internal Assessment) ● Option C: Energy ● Topic 2: Atomic Structure ● Topic 3: Periodicity ● Topic 4: Chemical Bonding and Structure ● Topic 10: Organic Chemistry and Nomenclature ● Topic 11.3: Spectroscopic Identification of Organic Compounds ● End of Course Review | <ul style="list-style-type: none"> ● Topic 12: Atomic Structure ● Topic 13: The Periodic Table-the transition metals ● Topic 14: Chemical Bonding and Structure ● Topic 15: Energetics and Thermochemistry ● Topic 16: Chemical Kinetics ● Topic 17: Equilibrium Fall Semester Exam | <ul style="list-style-type: none"> ● Topic 18: Acids and Bases ● Topic 19: Redox Processes ● Topic 20: Organic Chemistry ● Topic 21: Spectroscopic Identification of Organic Compounds ● Option C: Energy (HL) ● End of Course Review |

XII. IA Due Dates:

As the IA investigation is a long-term project reflecting student mastery, it is important to stay on schedule. As such, internal checkpoints are used to ensure that students do not fall behind. (Dates may be changed due to unforeseen circumstances.)

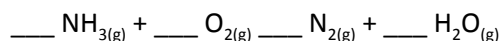
- **JAN 12** --**Checkpoint 1:** Three Potential Topics and Research Questions Due
- **JAN 21** --**Checkpoint 2:** Proposal: Topic, Personal Engagement, and Chemical List Due
- **JAN 25** --Proposal: In Class Peer Reviews
- **JAN 29** --**Checkpoint 3:** Exploration and Safety Contract Due--must be approved prior to beginning
- **FEB 2-12** -- IA Workdays
- **FEB 18** -- **Checkpoint 4:** Rough Draft Due
- **FEB 22-23** --Individual Conferences (before or after school)
- **MARCH 1** -- **Final Checkpoint:** Final Report Due -- hard copy & electronic

****Intervention Policy**

While the IA itself will not contribute to the course grade, failure to meet the given checkpoints will result in an intervention plan including a meeting between some or all of the following: student, teacher, IB Coordinator, and parents/guardians.

XIII. Sample Exam Questions:

1. What is the sum of the coefficients when the equation for the combustion of ammonia is balanced using the smallest possible whole numbers?



- A. 6 B. 12 C. 14 D. 15
(Paper 1)

2. The two isomers of $[\text{Pt}(\text{NH}_3)_2\text{Cl}_2]$ are crystalline. One of the isomers is widely used in the treatment of cancer.

- i. Draw both isomers of the complex
- ii. Explain the polarity of each isomer using a diagram of each isomer to support your answer
- iii. State a suitable method (other than looking at dipole moments) to distinguish between the two isomers
- iv. Compare and contrast the bonding types formed by nitrogen in $[\text{Pt}(\text{NH}_3)_2\text{Cl}_2]$.

(Paper 2)

XIV: Stony Point Academic Honesty Policy

Remember, you do not have control over a lot of things in life, but you do have control over your integrity. Violating academic integrity in any way, however small, is a choice that you make.

Students will be expected to follow the Stony Point High School Academic Honesty Policy as well as other agreed upon guidelines. In addition to the official policy, here are some guidelines to help students define cheating and plagiarism. **Students should report any suspected violations to these policies immediately.**

Cheating

Looking off another person's exam for answers

Collaborating with others on work that is supposed to be completed independently

Copying another student's homework, written assignments, examination answers, electronic media, or other data.

Assisting or allowing someone else to cheat.

Willfully copying or allowing class assignments to be copied and falsely presenting them as your own work and effort.

Using unauthorized materials such as books, notes, or "cheat" sheets to answer examination questions

Using or consulting electronic equipment including cell phones, PDA's, IPODS, etc. during a testing situation.

Being informed or informing, verbally or otherwise, of test questions or answers either during or prior to the testing situation.

Plagiarism

Representing the ideas, expressions, or materials of another without due credit.

Paraphrasing or condensing ideas from another person's work without proper citation.

Failing to document direct quotations and paraphrases with proper citation.
Submitting a paper purchased from a research or term paper service, including the Internet.
Undocumented Web source usage.

XV. Writing an Extended Essay in Chemistry

The extended essay is an in-depth study of a focused topic chosen from the list of available Diploma Programme subjects for the session in question. It is intended to promote academic research and writing skills, providing students with an opportunity to engage in personal research in a topic of their own choice, under the guidance of a supervisor (an appropriately qualified member of staff within the school). This leads to a major piece of formally presented, structured writing, in which ideas and findings are communicated in a reasoned and coherent manner, appropriate to the subject chosen. It is mandatory that all students undertake three reflection sessions with their supervisor, which includes a short, concluding interview, or viva voce, with their supervisor following the completion of the extended essay. Chemistry is the science that deals with the interaction of chemical systems, energy and structure. A chemistry EE should be specific in its focus, and emphasize the essential nature of this subject. For more information regarding topic choice and requirements for an EE in chemistry please visit your teacher's website.

XIII: Classroom Policies and Procedures

Supplies Needed:

1. Notebook- size and style up to your discretion. Used for taking notes
2. Binder- Used for organizing handouts and homework assignments
3. Internet access (You must let me know as soon as possible if this is an issue, if not it will be assumed that you have access)
4. A pen and a pencil for each class
5. A scientific calculator
6. Class Supplies _____

Where to find your assignments:

Agendas, curriculum guides, and class materials can be found on your teacher's website and Schoology. This information will be updated frequently, so make sure to check it often. You are responsible for all assignments given in class or via Remind.

Absence Policy:

If you know about your absence ahead of time (i.e school trips, college visits, planned trips with family)

You are expected to keep up with the agenda. This means that you will need to talk with me before your absence to discuss the work you are going to miss. Work will be due the day you return, including homework due the day of your return.

If you will be missing a test or quiz, you are expected to make arrangements with me for a makeup time **BEFORE you leave**. You will not necessarily be required to take the assessment before you leave, but you need to set a time/date for the test.

If you are sick or miss class unexpectedly because of an emergency,

I expect you to turn your work in that was assigned for the day you were absent **ON THE DAY YOU RETURN** unless you have contacted me ahead of time and made alternate arrangements.

Any work assigned during your absence is your responsibility to get and complete within the one block per day absent policy at Stony Point High School.

Missing the class before a test **DOES NOT** excuse you from taking the test, unless there are extenuating circumstances that you notify me about AHEAD OF TIME.

IB Chemistry Syllabus Contract

Teacher: Mr. Brad Calvin (B208)**Student**

I _____ have read the syllabus and the course standards and understand
(Print Student Name)
what is required of me in this course. I have read the honor code, late work and grading policies of the student handbook and understand that I am expected to follow each policy.

(Student Signature) Date _____

Interests/Activities:

Anything you want me know to about you?

Parent/Guardian

I _____ the parent/guardian of _____
(Print Name) (Print Student Name)

have read the syllabus and the course standards and understand what is required of my child in this course. I have read the honor code, late work and grading policies section of the student handbook and understand that my child is expected to follow each policy.

(Parent/Guardian Signature) Date _____

Parent/Guardian Email: _____

Parent/Guardian Phone Number: _____

Is there anything about your student that you feel I should know to make this a successful school year?