Welcome to your Junior year of IB Biology SL course! The purpose of this course is to prepare you for your IB exam towards the end of this school year. You and I are entering into a partnership that will enable you to be successful when you sit for your exam. This partnership requires a lot of work on both sides: your part is to come to class prepared and to review, each night, the concepts taught to you and my part is to present the concepts in several different ways to enhance your learning. For all the exciting labs and information, follow Ms. Boorom’s class twitter page @BooromBio.

**Course Content (sequence may vary):**

- Intro to Statistics/ IA

**Topic 1. Cell biology**
1.1 Introduction to Cells  
1.2 Ultrastructure of Cells  
1.3 Membrane Structure  
1.4 Membrane Transport  
1.5 Origin of Cells  
1.6 Cell Division

**Topic 2. Molecular biology**
2.1 Molecules to Metabolism  
2.2 Water  
2.3 Carbohydrates and Lipids  
2.4 Proteins  
2.5 Enzymes  
2.6 Structure of DNA and RNA  
2.7 DNA Replications, Transcription and Translation  
2.8 Cell Respiration  
2.9 Photosynthesis
Topic 3. Genetics
3.1 Genes
3.2 Chromosomes
3.3 Meiosis
3.4 Inheritance
3.5 Genetic Modification and Biotechnology

Topic 4. Ecology
4.1 Species, Communities and Ecosystems
4.2 Energy Flow
4.3 Carbon Cycling
4.4 Climate Change

Topic 5. Evolution and biodiversity
5.1 Evidence for Evolution
5.2 Natural Selection
5.3 Classification and Biodiversity
5.4 Cladistics

Topic 6. Human physiology
6.1 Digestion and Absorption
6.2 The Blood System
6.3 Defense Against Infectious Disease
6.4 Gas Exchange
6.5 Neurons and Synapses
6.6 Hormones, Homeostasis, and Reproduction

Option D: Human Physiology

How to be successful in IB Biology:
- Attend class regularly and on time.
- Stay on pace! Read the suggested book sections.
- Participate appropriately and complete your work to the best of your ability.
- Maintain a science binder.
- Frequent the Canvas calendar.
- Meet with the teacher during office hours.
- Remediate if necessary (see grading guidelines for more information)
- Attend review sessions and mock exam practices (spring)
- Use InThinking Biology Website (access provided by Ms. Boorom)
- Optional: BIOZONE IB Biology (2nd Edition) Student Workbook
Grading Policy:
The Volusia County grade scale will be used in determining your letter grade. Formative assessments are weighted at 40% which may include classwork, quizzes, some labs, homework and activities. Summative assessments are weighted at 60% and may include tests, lab reports/ IA, projects. The grading policy in my classroom is in conjunction with Volusia County Schools Secondary Grading Guidelines.

*** Please note the course will conclude an External Assessment (Paper 1 & 2) and Internal Assessment ***

Remediation of Summative(s)
Students will be given two weeks from the date that grades for a summative are posted to Gradebook to re-take an alternative summative test. This excludes: semester exams, projects, lab reports, or IAs. Prior to the re-take, students who earned less than a 70% must complete test corrections with me during tutoring time. Once remediation is complete, a re-take will be scheduled at a different day. This entire process must be complete within the two-week window. The higher of the two grades will remain.
Students that earned higher than a 70% that want to improve, will be required to do a reinforcement activity prior to a re-take. Reinforcement must be complete during a tutoring time and prior to the retake. This process must also fall during the two-week window from which the grade was posted on Gradebook. The higher of the two grades will remain.

Tutoring times: some Wednesday afterschool 2:30-3:30 (exclusion- day(s) of required teacher meetings) Alternating Tuesday/Thursdays during lunch and Afterschool. Calendar is posted in the classroom on the bulletin board for reference.

Late Work
All assignments are expected and due on the due date in class or submitted electronic by the class period time for full credit. Do not submit papers under doors or leave in the classroom. Hand work to the teacher. Make sure that your name is on the document, even if E-mailing papers. Please put full name on the file attached.

If work is submitted past the due date, ten percent will be deducted the first day late, 50% for the second day and zero credit after that.

As before, students have one day per excused absence, to complete and submit work for full credit.

Please check Gradebook often to monitor progress. Weekly progress reports can be sent home, but it is the responsibility of the student to ask for the form and to fill out.
Assessments:

External assessment details—SL

**Paper 1**
Duration: ¾ hour  
Weighting: 20%  
Marks: 30  
- 30 multiple-choice questions on core material, about 15 of which are common with HL.  
- The questions on paper 1 test assessment objectives 1, 2 and 3.  
- The use of calculators is not permitted.  
- No marks are deducted for incorrect answers.

**Paper 2**
Duration: 1¼ hours  
Weighting: 40%  
Marks: 50  
- Data-based question.  
- Short-answer and extended-response questions on core material.  
- One out of two extended response questions to be attempted by candidates.  
- The questions on paper 2 test assessment objectives 1, 2 and 3.  
- The use of calculators is permitted. (See calculator section on the OCC.)

**Paper 3**
Duration: 1 hour  
Weighting: 20%  
Marks: 35  
- This paper will have questions on core and SL option material.  
- Section A: candidates answer all questions, two to three short-answer questions based on experimental skills and techniques, analysis and evaluation, using unseen data linked to the core material.  
- Section B: short-answer and extended-response questions from one option.  
- The questions on paper 3 test assessment objectives 1, 2 and 3.  
- The use of calculators is permitted. (See calculator section on the OCC.)

IB TEST DATES:  
PAPER 1 & 2  May 17, 2023 (PM session)  
PAPER 3  May 18, 2023 (AM session)
*Course assessments will mirror External Assessment format for each unit throughout year.

<table>
<thead>
<tr>
<th>Internal assessment</th>
<th>Based on 5 criteria:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rough draft due: 12/16/22</td>
<td>• Design (D)</td>
</tr>
<tr>
<td>Final: March 2023</td>
<td>• Data Collection and Processing (DCP)</td>
</tr>
<tr>
<td>20% of IB grade</td>
<td>• Conclusion and Evaluation (C+E)</td>
</tr>
<tr>
<td></td>
<td>• Manipulative Skills (MS)</td>
</tr>
<tr>
<td></td>
<td>• Personal Skills (PS)</td>
</tr>
</tbody>
</table>

*Labs conducted during school year will focus on criteria points. Students will complete 40 hours of lab work.

IB also requires COMPLETION of GROUP FOUR Project. More information to be released in class.

**Material requirements:**

- Three ring binder with Dividers
- College rule paper
- Blue/Black pens for homework
- Pencils for diagrams
- Colored pencils for diagrams
- Calculator

**Homework:**

It will be necessary to continue your learning at home so homework will be assigned. It is to be completed by you by yourself. Remember that cooperation is tolerated however copying is not! Homework will be used to check for understanding of a concept or to extend the learning of the concept. If it is determined that copying or cheating has occurred a phone call will be made to parents as well as a written report sent to both IB counselor and IB coordinator. Three infractions could result in immediate dismissal from the IB program.

**Labs (Internal Assessment):**

Every IB subject has an internal assessment component and science’s IA is the labs that we design, perform, evaluate and write up. This year you will be exposed to all of the IB lab criteria. All labs will be typed on white paper in 12 font. Prior to each lab we will discuss how it will be written up and what criterion (criteria) will be evaluated. Due to limited supplies and equipment it may be necessary to perform the labs as a group but the write ups will be independent. Consequently, if you miss the lab day you will be given one week to make the lab up after school or during lunch by appointment. If not made up, you will earn a zero for the lab. ***You also will perform one complete internal assessment lab to
submit to IB. You will have to pick your own topic and work on this project in class during the first week of November. More information will be discussed in class.

Quizzes:

Quizzes will be used to determine if you understand the material being taught. You should expect quizzes on Thursday since that is our assigned IB day. If you miss a quiz, you must make it up the next day at lunch. This will allow me to get your quiz graded in a timely manner and will allow other members of your class to receive their quiz grades.

Tests:

Tests will be given after every major unit of material. This may involve 3-5 chapters of information. It is your responsibility to review for the test and be prepared for it. The tests will mirror the IB exam with multiple choice questions as well as data-based questions and essays. The tests will take up most of the period. If you miss a test, you will need to plan to stay after school the following day to make it up. You need to plan for at least one hour after school to make up the exam. The testing day for science is Thursday.

Electronic devices:

School policy states that you may have cell phones and iPods on campus. However, they are not to be out in my classroom unless I give permission. You will not be able to use them or have them anywhere near your desk during test time.

Dress code:

On lab days the dress code will differ due to lab safety regulations. No open toed shoes, flip flops or sandals will be allowed in the lab. If you wear these items, you not be allowed to participate in lab and you will lose lab hours.

Tutoring times:

I will be available Tuesday and Thursdays during part of lunch and select days after school.

Field Study:

Part of Biology is applying science topics and skills in field studies. We are planning two distinct field study learning days; One is to Rose Bay, an estuary, at Spruce Creek Park and the other is to Lyonia Preserve, sand pine and scrub jay habitat, in Deltona. The following are tentative dates of study: Rose Bay, in January and Lyonia, in April. More information will be disseminated.

Tardy and Absentee Policy:
• After the bell rings the door will be locked, any student not present in the room will be marked tardy. DHS tardy policy will be followed.
• If you are absent, it is YOUR RESPONSIBILITY to obtain any and all make up work.
• Class work is posted on the CANVAS CALENDAR. Please check the calendar if you are out of school. If you miss a lecture, you will need to get the notes from a classmate and set up a time to meet with me for any further explanation or tutoring.
• Alternative assignments may be assigned for missed labs. Keep in mind most labs are done in groups. The alternative assignment will be homework on your own.
• You have 1 day for each day absent to make up work. Stay up to date on CANVAS calendar so you don’t fall behind.

Class Rules:
1. Treat everyone with respect.
2. Be on time and in your seat before the tardy bell rings.
3. Stay seated.
4. Raise your hand and wait to be called on.
5. Use inside voices to communicate.
6. Follow all safety procedures and teacher instruction.
7. Turn off and put away all electronics!!!! (Unless used for BYOT lesson)

***NEW TO this year FOLLOW THE BULLDOG WAY!***

Discipline Procedure:
• Warning
• Seat re-assignment
• Student conference
• Parent contact/ Guidance contact
• School Disciplinary Referral

***Order of procedure may not be followed or steps may be skipped depending on severity of inappropriate behavior.***
INTENTIONALLY Left Blank so you can tear off and keep SYLLABI for your reference and return acknowledgement form on next page and return to Ms. Boorom by FRIDAY along with LAB SAFETY form.
IB Biology Syllabus Acknowledgement

Ms. Boorom, Biology Instructor
Email: snboorom@volusia.k12.fl.us
Room: 15-105

Please sign and have your student return this page to class. It will be placed in your student’s class file. You may keep the rest of the syllabus for your own use. It is also available on the Canvas page. Thank you for your assistance and participation in your student’s academic future.

By signing below, I acknowledge receiving and reading the IB Biology science syllabus. I understand the policies, procedures, and requirements for success in completing this class. Please contact me if you have any questions or comments at any time during the school year. I look forward to the 2022-2023 school year!

Sincerely,
Ms. Boorom

_____________________________________           ___________________________________
Parent/ Guardian Signature                   Student Signature

______________________________  ______________________________
Printed                                         Printed

Date: ______________________________

Email: ______________________________

Phone:______________________________

Please also provide best form of parent/ guardian contact information and/ or any other pertinent information.