



I. Course Summary

The objective of this course is for students to learn the fundamentals of Calculus, vectors and probability and statistical topics. This is an IB course, upon completion of which students will be ready for the Mathematics Analysis SL IB examination. The material covered in this course is comparable but not identical to a 1st semester college level Calculus course. Students are advised to check with individual colleges to see what, if any, requirements may be fulfilled. The complete curriculum and syllabus is specified by the IB Organization and a detailed course guide is available online. The expectation is that all students have successfully completed a pre-calculus course or its equivalent prior to enrollment.

II. Units of Study

The following units are covered in this course throughout the year:

- Limits
- Differentiation
- Applications of the Derivative
- Integration
- Logarithmic and Exponential Functions
- Volume of a Revolution
- 2-D and 3-D Vectors
- Probability
- Statistics

III. Standards and IB DP Assessments

It is the aim of all IB Diploma courses to develop logical, critical and creative thinking as well as patience and persistence in problem solving.

IV. Text/Resources

The text for this class is *Haese and Harris Mathematics Analysis and Approaches SL*, and can be found on my Schoology page. Other resources are available on my Schoology page. Additional required materials are pen/pencil and folder/notebook and a graphing calculator. These materials are to be brought to class daily. There is a graphing calculator available on the SPPS iPads.

V. Methodology

In this course the students will have the opportunity to understand and appreciate both the practical use of mathematics and its aesthetic aspects. They will be encouraged to build on knowledge from prior learning in mathematics and other subjects, as well as their own experience. Students will develop mathematical intuition and understand how they apply mathematics in life.

Distance Learning: Distance learning for this class will take place via Schoology and Google Meets. Course materials will be organized by weekly topics. Each week you should expect:

- A video from me explaining new topics
- 1-2 assignments/activities to complete and turn in through Schoology
- 2-3 synchronous learning times
- A check-in assignment and/or a summative assessment

Extra Help

Use your resources! Instructional videos in the Schoology, practice worksheets, Khan Academy, siblings/friends. If you have more homework questions, or just want to see everyone, participate in the weekly office hour to get your questions answered. This is not required, but **HIGHLY RECOMMENDED!**

VI. Methods of Assessment

Grades will be based upon the percentage of points earned. Points may be earned through both formative (30%) and summative (70%) assessment. The formative assessment will consist of homework, discussions and group projects while the summative assessment will include quizzes, tests, and projects. For additional details please see the school grading policy which can be found on Highland's website under student resources.

There is one internal assessment in the form of a math exploration assigned during the course that students may use to fulfill requirements for the Mathematics SL program. The exploration is a mathematics paper written about a topic of the student's choosing.

VII. Expectations

- Be Respectful
- Be Responsible
- Be Safe

Academic Honesty: Highland Park High School expect all students to understand the meaning of academic honesty and demonstrate it in all aspects of their learning. In this class, it is expected that you do not give, receive, or tolerate unauthorized aid in your work. The full policy can be found on the HPSH website.

VIII. Other Course Information

This is a college level course and it is expected that all students will act in a safe, respectful, and responsible manner. All Highland Park school and district policies dealing with absences, tardiness, late work and other issues will be followed. For more information on the grading scale, make-up work, retakes, and/or late work see the "*Highland Park Senior High School Grading and Assessment Policy*". Students can access scores, grades, and/or missing work on Schoology at <https://schoology.spps.org>, and attendance on the "parent/student portal" tab at <https://www.spps.org/highlandsr>

Homework is assigned daily and will be checked for completion and correctness in various manners. All students will receive a quarterly course assignment sheet listing assignments, due dates, tests, and projects.

Good Digital Citizenship in

Ms. Schleper's Class includes:

- Participate in class meetings only if you are invited. No one else should be on camera.
- Don't take photos or screenshots or record videos during the meeting.
- Show respect at all times for yourself, classmates, and teachers.
- Raise your hand if you want to talk and your teacher will call on you.
- Be present and engaged with your class.
- Wear clothes that would be appropriate for school.
- Be prepared and on time.
- Pick a quiet spot and let others around you know you are in a meeting. Have your materials beside you before the meeting begins. Look around you. Make sure anything on video is something that can be seen by others.
- Participate – take notes, ask questions, and participate in discussions.
- Share your thoughts/ideas. We want to know what you think. YOU MATTER!

I can be most easily reached via e-mail at kelly.schleper@spps.org. For the status of assignment completion and class grades please use Schoology.