I. Course Summary

The objective of this course is for students to gain an understanding and an appreciation of mathematical concepts which can be used in their future studies and life endeavors. Math Applications a SL2 is the second of the two courses in the Math Applications and Interpretations, (AI), International Baccalaureate Programme, (depending upon a students level of success in their other math courses the first course may not be necessary). It is a course that follows the prescribed international curriculum, preparing students for the IB AI standard level exam which is given in May. Students are strongly encouraged to sign up for this examination as the course is constructed to prepare students for the exam. The intent of the AI curriculum is to target students less interested in theoretical mathematics and more application oriented. Students who have a desire to major in math intensive areas, such as engineering, are encouraged to take the IB Analysis and Approaches (AA) track.

II. Units of Study

Topics covered include: Loans and Annuities, Bivariate Data, Hypothesis Testing, Exponentials and Logarithms, Trigonometry, Differentiation, Integration, Discrete Variables, Normal Distributions and Voronoi Diagrams

III. Standards and IB DP Aims

It is the aim of all IB Diploma math courses to develop logical, critical and creative thinking as well as patience and persistence in problem solving. For a complete list of all aims please refer to the IB Math Sl Subject Brief at http://www.ibo.org/globalassets/publications/recognition/5_mathsl.pdf

IV. Text/Resources

The text for this class is Haese, Mathematics Applications and Interpretation SL 2, 2019. Additional required materials are pen/pencil and a notebook. A graphing calculator will be required for completion of most of the homework and tests. An on-line graphing calculator is currently available at https://mn.testnav.com/client/index.html#login?username=LGN265231722&password=L5E4J8P8 A limited number of TI Graphing calculators may be available for check out with priority given to students in economic need based on free/reduced lunch eligibility for the IB tests.

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.

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, notetaking, and progress towards the internal assessment while the summative assessments will consist of weekly tests with the final submission of the internal assessment in quarter 2. Test questions may come from released IB Math AI SL External Assessment questions in order to become familiar with the format. For additional details please see the school grading policy which can be found on Highland’s website under student resources.

Students who register for the IB test will also receive an IB grade. This grade will follow the IB grading scale of 1 to 7, with 7 being the highest. 20% of this grade will be based on the Internal Assessment while the other 80% will be based on the external assessment given in May. This grade is calculated by the IB and is not generated by the instructor. Due to the pandemic, last spring’s Internal Assessment turned out to be worth more than 20% of the IB grade and with current conditions we should view this year’s the same way.
VII. Other Course Information

The anticipated structure of the course will follow a weekly schedule as follows:

Monday: Period 4 and 6 synchronous class review of last Friday’s test, intro to this week’s material; instructional videos for the week will be in the current week folder.
Tuesday: 1st homework of the week due and a poll for homework questions.
Wednesday: 2nd homework of the week due with a poll for homework questions; Period 4 synchronous class to prepare for Friday’s test or working on internal assessment.
Thursday: occasionally 3rd homework of the week due, review homework question videos; Period 6 synchronous class to prepare for Friday’s test or working on internal assessment.
Friday: Take weekly summative assessment

I am available for help at the scheduled office hours (hasn’t been published yet) as well as by arrangement.

This is a collegiate 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, technology (including cell phones) and other issues will be followed. Additional details can be found on the school’s website.

Due to the fluid nature of the current environment, there may be changes to some of the details of the course, although the curriculum covered is not anticipated to change.