**IBMYP Subject Overview**

**2021-22**

**Subject Area: Math Course: Extended Math MYP Level: 5 Teacher(s)**: Schwieder

**SUBJECT TO CHANGE AS THE NEEDS OF THE CLASS DEMAND**

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| Time **Frame**  **(Dates)** | Unit Title and Topic (\*=interdisciplinary connection; @=Action) | **MYP Objectives** | State Standards | **Key Concept** | **Related Concepts** | **Global Context** | **Statement of Inquiry** | **MYP Assessment Task**  **&**  **ATL Focus** | **MYP Criteria** | **Learner Profile Focus** | **Action** |
| Sep 8th – Oct 7th | Unit 1 Scientific Notation, Linear and Quadratic Equations | Knowledge and Understanding  Communication  Real-life problems | n/a | Relationships | Equivalence, Model and Simplification | Scientific and Technical Innovation | Through innovations in mathematics and modelling mathematicians create models and simplify equations in order to solve real world problems | Rich Eisen 40 yard dash  Chapter 1 and Error Test | A, D | Risk-taking |  |
| Oct 12th – Nov 5th | Unit 2: Functions | Knowing and Understanding  Investigating Patterns  Communicating  Applying mathematics in real-life contexts | AII.4 & 6 | Form | Representation, change and pattern | Identities and relationships | Working systematically from answer to question | Even-odd functions investigation  Polynomials Graph Investigation | B | Inquirer |  |
| Nov 8th – Nov 19th | Unit 3: Geometry | Knowledge and Understanding  Communication  Investigations | T2, 3, 5, 6 | Relationships | Measurement, model and representation | Scientific and Technical Innovation | Show how rotation relates to displacement and use this knowledge to answer timeless questions | Sine and cosine graph investigation  Sum of Sine Waves real world problem | B, C, D | Knowledgeable |  |
| Nov 22nd – Feb 11th | Unit 4 - Trig Functions and Solutions Triangles and Circles | Knowledge and Understanding | T1, T4 | Form | Equivalence, model and simplification | Identities and Relationships | Understand why triangles are ubiquitous | Trig Unit Test | A | Reflective |  |
| Feb 14th -Mar 18th | Unit 5:  Triangles and Identities | Investigation, Communication, Real life problems | n/a | Form | Pattern, representation and simplification | Scientific and Technical Innovation | Identify and apply methods to simplify and then solve complex problems | Sum of Sine Waves Real world problem | B, C, D | Principled |  |
| Mar 21st- May 20th | Unit 5: Advanced Algebra  Logs, Series | Investigation, communication and real world problems | MA.3 | Relationships | Representation, change and pattern | Identities and relationships | Explore the concept of inverse functions in order to solve exponential equations | Investigate the relationship between functions and their inverses | B, C, D | Balanced |  |
| May 23rd - June 17th | Unit 6: Probability and Statistics | Knowledge and Understanding, Communication and Real world problems | AII.3 | Logic | Equivalence, change and justification | Scientific and technical innovation | Determining the probability of random events is determined by the change in the number of possibilities | Unit Test  Determine the probability of each hand in poker | A, C, D | Open minded |  |

**Support of Personal Project: *(Develop a narrative description of the ways in which your class supports the skills students will need to complete the Personal Project from spring of their freshman year through fall of their sophomore year. Areas to consider include but are not limited to the development of students’ autonomy, self-confidence, reflection, perseverance, time-management and organization, and research.)***