Introduction to Applied and Pre-Calculus Mathematics MAP20S Course Outline

Course Description: Grade 10 Introduction to Applied and Pre-Calculus Mathematics MAP20S is intended for students considering post-secondary studies that require a math pre-requisite. This course is foundational for students to branch into grade 11 Applied Math or grade 11 Pre-Calculus Math. Students will use mental math, problem solving, and theoretical mathematics to illustrate the connections between concrete (diagrams, measurements, illustrations) and abstract (algebra, theoretical math).

Course Requirements: In order to be successful in Introduction to Applied and Pre-Calculus Mathematics it is important that students have received credit in MAT 10S (grade 9 math) and received a mark over 60%. Students who earned less that 65% in grade 9 are rarely successful in this course as they lack skills that needed to be learned before the start of this course. Students who earned less than 65% but still really want this math course may want to consider a tutor if they wish to be successful.

Resources: Students will be receiving the textbook *Foundations and Pre-calculus Mathematics 10* published by Pearson. Here are some useful websites:
https://www.khanacademy.org/math
http://www.edu.gov.mb.ca/k12/dl/downloads/

General Learning Outcomes in MAP20S

1) Algebra and Number
2) Trigonometry
3) Relations and Functions

Topics Covered in MAP20S

1) Factors and Products – This topic teaches students to factor, multiply, and divide polynomials.
2) Trigonometry – This topic teaches students to find different sizes of angles and sides of triangles using Sine, Cosine, and Tangent ratios.
3) Measurement – In this topic students will learn to find the volume and surface area of pyramids, prisms, and spheres and their composite shapes. Students will also practice converting between different units of measurement in metric and imperial and between metric and imperial.
4) Roots and Powers – This topic expands the grade 9 topic of power rules.
5) Relations and Functions – This topic is covered in 3 different chapters. Students will learn what a function is and be introduced to functional mathematics. Students will learn different techniques of graphing linear functions. Students will also learn to solve systems of linear equations.

Course Evaluation Structure:
Students will be assessed the following ways
1) Quizzes – Students will be given homework almost every day. It is important to keep up with the homework. As a means for checking student practice, they will be receiving 1 or 2 quizzes each chapter. These will be reflective of the daily practice homework assignments that the students will get regularly. Quizzes must be written in pencil. Value: 10%
2) Review Assignments – Students will receive a few assignments throughout the course that review all content covered so far in the course. Review assignments must be completed in pencil. Value: 15%
3) Corrections – All students will be required to do corrections on all of the tests (unless they get 100%). Corrections are to be done in pen (not red). Doing corrections gives the students a full set of correct answer keys to review with for the final exam. Doing corrections means that students record a full, correct answer showing all work. Value: 10%
4) Tests – All tests are to be written in pencil. Value: 65%
5) Final exam
   The final mark will be 75% term marks and 25% final exam.

Student Responsibilities and Expectations:
Students are expected to follow the policies and expectations as laid out in the student handbook.
Below are a few highlights but please refer to the handbook for a complete list.
1) Students are expected to be on time. If you are late, please enter quietly and respectfully.
2) No food or drink is allowed in class. There are 3 exceptions: 1) water is permitted when there are no lab supplies in the room 2) if food is brought for the purpose of community and sharing with the entire class 3) if food was brought for the purpose of sharing before class and it isn't finished yet.
3) All assignments are to be completed on time. This means they are to be handed in at the beginning of the class. If an assignment is late the expectation is that the student will be going to the homework room during lunch times to complete the assignment. As well, 5% of the value of the assignment will be deducted per day up to a maximum of 25%.
4) Only one person will be allowed out of class at a time with given permission. This is a privilege and can be taken away if abused. Breaks should be used to get necessary supplies and to use the washroom.
5) Cell phones are not to be a distraction in class. They may not be used as a calculator. If you bring a phone to class the ringer must be off (not even on vibrate). The phone must sit on your table in front of **ALL** of your other supplies. It may not be in a pocket, purse, or anywhere else. You may not send any messages in class. If there is a time where the no one is addressing the class (teacher, student, video, announcement, etc.) students will be permitted to check their phone and briefly read a message, but sending of messages is not allowed. If a student has a cell phone, they will not be allowed to leave during class time with their phone (this includes getting a drink or going to the washroom – phones stay on the table in front of **ALL** of your other supplies). If you can't leave your phone behind you don't need to go to the washroom. If a student abuses the privilege of having their phone with them in class they will be required to leave the phone on the front table for future classes.
6) Students are expected to follow all safety rules. This includes no throwing things. If a student breaks any safety rules during a lab they may be removed from that lab, receive a 0% on that lab and possibly be banned from all future labs.
7) Please do not miss any tests or labs. If a student misses a test the test will be written on the first day back at school. If a student misses a test or a lab without a valid reason like illness or an

appointment, they may receive a mark of 0% with no chance of redeeming that mark. Note: work does not count as a valid reason.

8) Cheating will result in 0% for all involved parties.
9) If you are absent from class it is your responsibility to find out what you missed. Please get any notes that you missed. After you have the notes you may come and ask for help on understanding them.
10) No hats or headwear is allowed during class time.

Extra Help:
I am very willing to offer extra help if it is needed. I am usually available for extra help before school or at 12:10 most days. Please let me know and I will try to make sure I don't book myself with other things during those times.

Contact:
Please feel free to contact me at:
(204) 434-6415 or
chthiessen@hsd.ca