Math 10C Course Outline

W.H. Croxford High School
2020-2021
Mr. Seland

OBJECTIVES OF THE COURSE:
This course is designed to prepare you for any stream of high school mathematics (20-3, 20-2, or 20-1), and subsequently post-secondary studies. Through this course, you will develop abilities in mathematics computation, reasoning, problem solving, communication, study skills and academic resilience, while learning to appreciate the beauty and practical relevance of mathematics.

COURSE MATERIALS:
- **Calculators**: a scientific calculator is required (ie. has "sin", "cos", "tan"). You are not permitted to use calculators that compute radicals in exact value. For examples of restricted calculators, see page 5 of this document
- **Notebook/binder** with lined paper and graph paper

OUTCOME-BASED ASSESSMENT:
This year, we will be using outcome-based assessment and achievement indicators for Math 10C. You will be assessed according to the following Learning Outcomes, as outlined in the Program of Studies.

Measurement:
M1: Solve problems that involve linear measurement using SI and Imperial
M2: Apply proportional reasoning to problems that involve conversions between SI and imperial units of measure
M3: Solve problems, using SI and imperial units, that involve surface area and volume of 3D shapes
M4: Develop and apply the primary trigonometric ratios to solve problems that involve right triangles

Algebra and Number Sense:
AN1: Demonstrate an understanding of factors of whole numbers by determining the prime factors, greatest common factor, and least common multiple
AN2: Demonstrate an understanding of irrational numbers
AN3: Demonstrate an understanding of powers with integral and rational exponents
AN4: Demonstrate an understanding of the multiplication of polynomial expressions
AN5: Demonstrate an understanding of common factors and trinomial factoring

Relations and Functions
RN1: Interpret and explain the relationships among data, graphs and situations
RN2: Demonstrate an understanding of relations and functions.
RN3: Demonstrate an understanding of slope
RN4: Describe and represent linear relations, using words, ordered pairs, tables of values, graphs, equations.
RN5: Determine the characteristics of the graphs of linear relations, including intercepts, slope, domain and range
RN6: Relate linear relations expressed in slope-intercept form, general form, and slope-point form
RN7: Determine the equation of a linear relation
RN8: Represent a linear function, using function notation
RN9: Solve problems that involve systems of linear equations in two variables, graphically and algebraically.

COURSE SCHEDULE		
TOPIC	**OUTCOMES**	**MONTH**
Factors and Multiples	AN1	Sept
Radicals & Exponents	AN2, AN3	Sept
Polynomials	AN4, AN5	Oct
CUMULATIVE EXAM 1		
Relations & Functions	RN1, RN2	Oct
Linear Functions	RN3, RN4, RN5, RN6, RN7, RN8	Nov
Systems of Linear Equations	RN9	Nov
CUMULATIVE EXAM 2		
Trigonometry	M4	Dec
Measurement	M1, M2, M3	Dec/Jan
Review		Jan
FINAL EXAM		

ASSESSMENT:

- Outcome-Based Assessment (70% of total mark): Each learning outcome listed above will be assessed at least twice according to the achievement indicators on the right
- Cumulative Assessments: student will complete two cumulative assessments (5% each) and a final exam (20% of total mark).
- Reassessments: students are permitted to reassess each outcome once.

OUTCOME GRADING	
Indicator	**Equivalent %**
Mastery	100%
Advancing	85%
Progressing	75%
Emerging	65%
Beginning	55%
Limited	45%
Not Meeting	20%

Daily Assignments:

- Students will be given practice assignments daily and and completion will be recorded in the gradebook. By completing the assignments, students will be prepared for Outcome Assessments and Exams.

STUDENT EXPECTATIONS:

- ATTENDANCE: Arrive on time, prior to the "late bell", and attend classes whenever possible. Tests that are missed due to an unexcused absence will result in a mark of zero. When you miss class, obtain all missed material online, from a friend, or from Mr. Seland. Keep up with all material and reminders on Google Classroom.
- SEATING PLAN: Due to Covid-19 restrictions, you will be required to sit in your assigned seat
- ATTENTION: Pay attention in class, take notes, and stay off of your cellphones.
- PREPAREDNESS: Come prepared to class (calculator, notebook/binder, pen or pencil)
- ATTITUDE: Come with an optimistic attitude, a willingness to learn, and a growth mindset. Encourage your peers, embrace diversity, and contribute to a positive atmosphere.
- SELF-ADVOCACY: Please ask for help when you do not understand the material.

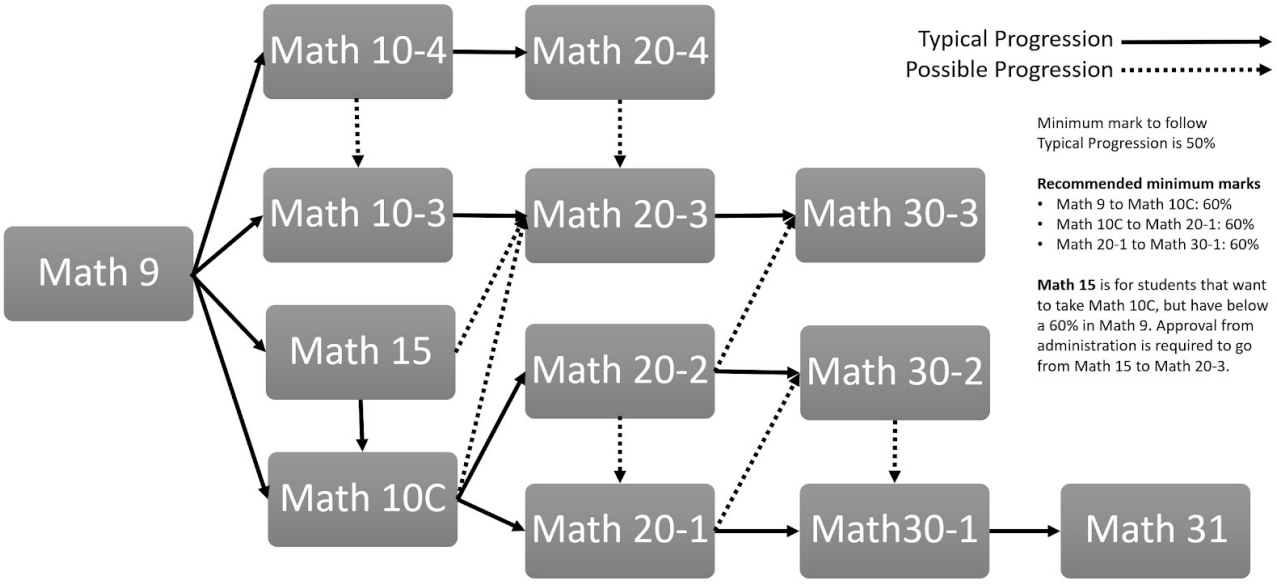
WISE USE OF TECHNOLOGY:

- You are not permitted to be on your cellphones while I'm teaching.
- During individual work time, students will be permitted to wear headphones and use their phones for music.
- Repeated misuse of technology during class will result in a call home or communication with school administration.
- Students found with active electronic equipment during quizzes, tests, or exams will receive a 0%.

MATH COURSE SEQUENCE:

It's helpful to start thinking about post-high school goals so you know which math stream will be best for your future. There is a big misunderstanding about the -3/-2/-1 streams: -3 is **not** an easier version of -2, and -2 is **not** an easier version of -1. It's true that there is less algebra as the numbers get higher, but they are quite different courses and have different goals.

- The -3 stream is generally for students that are not going to college or university. Everything in -3 is useful in your life and/or in work situations. It gets you into many trades programs, and some college programs and university programs that do not require math.
- The -2 stream is for students who want to go to college/university in programs that have math requirements that are more practical/less theoretical. It has a lot of really valuable content, is challenging, but has less "abstract" topics like algebra than the -1 stream. It has some of the same content as -1, but taught in a more practical, real-world application way. Many students take the -2 stream if their post-secondary program doesn't require it so they can have higher marks for the application process.
- The -1 stream is intended only for students that are going into college/university programs that require theoretical mathematics, such as engineering, sciences, or finance/management. If you don't need calculus, you probably don't need -1 (though you should **always** check on the college/university websites).


Math 9
Math 10-4
Math 10-3
Math 15
Math 10C
Math 20-4
Math 20-3
Math 20-2
Math 20-1
Math 30-3
Math 30-2
Math30-1
Math 31
Typical Progression
Possible Progression
Minimum mark to follow Typical Progression is 50%
Recommended minimum marks
• Math 9 to Math 10C: 60%
• Math 10C to Math 20-1: 60%
• Math 20-1 to Math 30-1: 60%
Math 15 is for students that want to take Math 10C, but have below a 60% in Math 9. Approval from administration is required to go from Math 15 to Math 20-3.