



Distance Education Course Outline Foundations of Mathematics 30

GENERAL INFORMATION

- i. Foundations of Math 30
- ii. Asynchronous, based out of Winston School in Watrous, SK
- iii. Teacher: Cindy Cantelon (Sept. to Nov. teacher: Malisa Thomas)
- iv. There are various ways in which I can be accessed. I prefer email communication.
email - cindy.cantelon@horizonsd.ca
Moodle - send me a message through Moodle
phone - Winston High School 946 3309 or text/call my cell phone 540 4448 (best to call right before school, at lunch, or right after school... if I am not available please leave your name and number and I will call back)

COURSE DESCRIPTION

- i. This pathway is designed to provide students with the mathematical understandings and critical-thinking skills identified for entry into post-secondary programs that do not require the study of theoretical calculus.
- ii. Topics include investing and borrowing money, logic, counting, probability, polynomial, exponential, logarithmic and sinusoidal functions.
- iii. Prerequisites: Foundations of Math 20

STUDENT LEARNING OUTCOMES:

- i. Demonstrate understanding of financial decision making including analysis of: renting, leasing, and buying credit compound interest investment portfolios. [
- ii. Demonstrate understanding of inductive and deductive reasoning including: analysis of conditional statements analysis of puzzles and games involving numerical and logical reasoning making and justifying decisions solving problems.
- iii. Demonstrate understanding of set theory and its applications.
- iv. Extend understanding of odds and probability.
- v. Extend understanding of the probability of two events, including events that are: mutually exclusive non-mutually exclusive dependent independent.
- vi. Demonstrate understanding of combinatorics including: the fundamental counting principle permutations (excluding circular permutations) combinations.
- vii. Demonstrate understanding of the representation and analysis of data using: polynomial functions of degree ≤ 3 logarithmic functions exponential functions sinusoidal functions.

TEACHING STRATEGIES:

- i. There are instructor prepared videos for each topic. The chapter overview communicates what needs to be completed each chapter. This includes practice questions with answers that can be found at the back of the text.
- ii. Each chapter has a few hand-in assignments and a pretest that will be marked. The pretest needs to be handed in and returned before the writing the chapter test. You can receive partial marks for showing your process – not just the right answer.
- iii. This is an asynchronous course so it may be completed at your own pace and schedule. However, ALL course material must be completed by January 20th (Semester 1) or June 16th (Semester 2). A suggested schedule is as follows:



Semester 1

Chapter 1	Sept. 2 – Sept. 17
Chapter 2	Sept. 18 – Oct. 2 (no exam)
Chapter 3	Oct. 5 – Oct. 19
Chapter 4	Oct. 20 – Nov. 4
Chapter 5	Nov. 5 – Nov. 20
Chapter 6	Nov. 24 – Dec. 4
Chapter 7	Dec. 7 – Dec. 18
Chapter 8	Jan. 5 – Jan. 20

Semester 2

Chapter 1	Feb. 1- Feb. 12
Chapter 2	Feb. 23 – Mar. 5 (no exam)
Chapter 3	Mar. 9 – Mar. 23
Chapter 4	Mar. 24 – Apr. 16
Chapter 5	Apr. 19 - May 3
Chapter 6	May 4 – May 14
Chapter 7	May 17 - June 2
Chapter 8	June 3 – June 16

- iv. The final exam will be scheduled with your school during exam time.

COURSE MATERIALS

- i. Textbook: Nelson Foundations of Mathematics 12.
- ii. While it is not required, using a graphing calculator or other graphing technology is valuable. You do not need to purchase one as we will use online simulators and calculators especially DESMOS. You can download DESMOS for free on your app or access it online at [desmos.com](https://www.desmos.com). You will also need access to a digital spreadsheet such as Microsoft Excel.

EVALUATION

- i. Assignments – 30%

Students will be responsible for the completion of their practice assignments. Practice assignments will be self-corrected using the answer key provided at the back of the book. No marks will be given for practice questions. Do not be tempted to skip these as they are important for your development. You will need to take responsibility for your learning... seek help, investigate what you don't understand and remedy the problem before hand-in assignments

Each chapter will also have hand-in assignments for marks. You will receive marks for process and for the correct answer.

- ii. Chapter Tests – 50%

After receiving feedback on your pretest assignment, students arrange a day and time to write tests with their supervising teacher and will be expected to be there. If an unforeseen absence does occur (ie. medical emergency, illness, funeral), I will need a phone call or email clarifying the reason for the missed exam.

I will email each chapter test to your supervising teacher when you have it arranged.

You may prepare ONE sheet of paper to be brought into the chapter test. This sheet may include definitions, sample questions, diagrams and notes for your success on the exam.

- iii. Final Examination – 20%

This will assess and provide feedback about your achievement related to the preparation for and completion of a summative final examination.

The final exam will be scheduled within your schools final exam time.