NSIOL NOVA SCOTIA INDEPENDENT ONLINE LEARNING

Mathematics 11 Course Syllabus

Mathematics 11 is an asynchronous, self-paced course. This means you can take the course wherever you want, at any time of day, and go at your own speed.

Meet with Mentor

You will be required to meet online with your mentor no fewer than 9 times, for 30 minutes each time. As follows:

Unit 1:

- Early/mid-point in each unit ***(following lesson 3 is recommended)***
- Before you write each end of unit assessment

Unit 2:

- Early/mid-point in each unit ***(following lesson 3 is recommended)***
- Before you write each end of unit assessment

Unit 3:

- Early/mid-point in each unit ***(following lesson 3 is recommended)***
- Before you write each end of unit assessment

Unit 4:

- Early/mid-point in each unit ***(following lesson 3 is recommended)***
- Before you write each end of unit assessment
- Before you write the final exam

Time Requirement

You have 18 months to complete the course work and write all assessments.

You should expect to dedicate 60 hours to this course, plus study time. For example, if you want to complete this course in a semester, you should spend at least 3 hours per week.

You will need to factor your mentor's availability into planning your timeline, as they may or may not be able to meet with you if you make a last-minute request. Remember to be respectful when arranging meetings.

Technical Requirements

A PC, laptop or Chromebook (a phone can be used, but may be less than ideal).

Phone or camera to photograph/scan work, which can then be uploaded into the LMS (Moodle)

An internet connection.

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Mathematics 11
Course Assessment

Course Outline

Your course grade will be based on the following breakdown:

Unit 1: 15%
Unit 2: 20%
Unit 3: 20%
Unit 4: 25%
Final Exam: 20%

Unit 1 Lessons:

1.1 Making Conjectures: Inductive Reasoning
1.2 Exploring the Validity of Conjectures
1.3 Using Reasoning to find a Counterexample to a Conjecture
1.4 Proving conjectures: Deductive reasoning and Proofs that are Not Valid
1.5 Reasoning to Solve Problems
1.6 Analyzing Puzzles and Games

Unit 2 Lessons:

2.1 Exploring Parallel Lines
2.2 Alternate Interior and Exterior Angles
2.3 Angle Properties in Triangles
2.4 Angle Properties in Polygons
2.5 Proving and Applying the Sine Law
2.6 Trigonometric Ratios and Obtuse Triangles (i)
2.7 Trigonometric Ratios and Obtuse Triangles (ii)

Unit 3 Lessons:

3.1 Exploring Data Frequency Tables, Histograms, and Polygons
3.2 Standard Deviation
3.3 The Normal Distribution
3.4 Z-scores and Standard Deviation
3.5 Confidence Level and Intervals

Unit 4 Lessons:

4.1 Graphing Linear Inequalities in Two Variables
4.2 System of Linear Inequalities
4.3 Optimization
4.4 Quadratic Equations (i)
4.5 Solving Quadratic Equations by Graphing
4.6 Quadratic Equations (ii)
4.7 Vertex Form of a Quadratic Equation
4.8 The Quadratic Formula