



**Loyola High School**  
**Secondary 5 NS Math (Science Program)**

**Teacher:** Mr. C. Taddeo

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**Online Textbook and Resources:** **Math-Help-Services (MHS)** <http://math-help-services.org>

**Supplies:** 3-ring binder, duo-tang, loose leaf, graph paper, pencils, eraser, ruler, scientific calculator (non-graphing). Ipads may be used in class to complete homework.

**Evaluation:** The final grade for the course will be calculated as follows: Term 1 → 20%  
 Term 2 → 20%  
 Term 3 → 60%

Competency 1 → 30%  
 “Solves a Situational Problem”

Competency 2 → 70%  
 “Uses Mathematical Reasoning → 70%

	Term 1	Term 2	Term 3
Homework/Assignments	10%	10%	5%
Quizzes	10%	10%	5%
Class Tests	50%	30%	30%
End of Term Evaluation	30%	20%	10%
Mid-Year Exam (Dec. 21 <sup>st</sup> )		30%	
Loyola Situational Problem Exam (June 2019)			20%
Loyola Reasoning Exam (June 2019)			30%

**Homework/Assignments:** Weekly evaluations based on topics covered in class.

**Quizzes:** Once or twice per week (time permitting) based on topics covered in class. No prior warning is required.

**Class Tests:** Based on topics covered during the term and must be completed in pencil. Scientific (non-graphing) calculators may be permitted during these tests.

Due to the fast paced nature and content of the course, students are required to review their notes on a daily basis and complete homework exercises to ensure they have understood the material presented to them. Students experiencing difficulty may attend tutorials (available times and location is posted on the course Moodle site) or by appointment. All grades will be posted on the course Moodle page also.

**Note:** NS 5 Math is a pre-requisite for students applying to Pure and Applied or Health Sciences at the CEGEP level. Given the competitive nature of these programs and the number of applicants, it is very important for students to be prepared for each class to obtain the best possible grade.

### Class Conduct and Rules:

- Homework will be assigned weekly through MHS and/or in-class worksheets to re-enforce principles and concepts discussed in class. Students are responsible for completing all their work on time and may complete remedial assignments to improve their MHS grades.
- Students are also expected to complete 5 Assignments (posted on the course Moodle page) per term which must be submitted to the teacher on time. **NO LATE ASSIGNMENTS** will be accepted. Students who do not submit an assignment will receive a grade of 0%.
- If a student is absent for any quiz or class test because of an illness or unexpected reasons, **he must make arrangements to write the test on the first day back in school.** Otherwise, the student will receive a grade of 0%. Students who miss tests regularly will be asked to provide a doctor's note upon return to class.
- Students are expected to complete weekly "pop-quizzes" in class **without** the use of a calculator. The purpose of these quizzes is to improve students mental mathematics skills and increase their "number sense" when problem solving. At the end of each term, the quiz with the lowest grade will be omitted.

### Course Content:

#### Arithmetic/Algebraic Expressions

- Powers and exponents
- Square roots
- Factoring

#### Optimization

- System of inequalities
- Polygon of constraints
- Optimization of a situation

#### Real Number Functions

- Properties of functions
- Polynomial functions
- Absolute value functions
- Square root functions
- Step functions
- Rational functions

#### Exponential and Logarithmic Functions

- Basic exponential function
- Exponential calculations
- Basic Logarithmic function
- Logarithmic calculations

#### Trigonometry

- Trig ratios (unit circle)
- Arc length
- Sine and Cosine functions
- Tangent functions
- Trigonometric identities
- Trigonometric equations
- Trigonometric formulas
- Inverse Trigonometric functions

#### Vectors

- Geometric vectors
- Operations on geometric vectors
- Algebraic vectors
- Scalar products

#### Conics

- Circle
- Ellipse
- Hyperbola
- Parabola

Any questions or concerns regarding these rules should be addressed to Mr. Carmine Taddeo as soon as possible. Thank you and the best of luck during this academic year.