

Philemon Wright High School
Course Outline 2010 – 2011
Mr. P. Messier (Room 243)
Mathematics 563 – 306 (Second Cycle, Year One)

1. Mathematics plays an important role in a person's intellectual, social and cultural development. Designed as a continuation of the Secondary Cycle One program, this mathematics program is aimed at developing the following closely linked competencies that have the same relative importance:
 - the student solves a situational problem (Competency 1).
 - the student uses mathematical reasoning (Competency 2).
 - the student communicates by using mathematical language (Competency 3).

The following topics will be studied, in order to target those competencies:

- i) Arithmetic and Algebra: Understanding real numbers, algebraic expressions and dependency relationships.
 - ii) Geometry: Spatial sense and understanding geometric figures.
 - iii) Statistics and Probability: Understanding random experiments and statistical reports.
2. Workbook: Mathematics 3000, by Chantal and Gérard Buzaglo.

Chapter 1: Real Numbers

Chapter 2: Algebraic Expressions

Chapter 3: Equations and Inequalities

Chapter 4: Relations and Functions

Chapter 5: Solids

Chapter 6: Area and Volume of Solids

Chapter 7: Isometry and Similitude

Chapter 8: Probability

Chapter 9: Statistics

3. Evaluation of students:

- Competency 1 (Solves a situational problem): 30%
 - Oral or written indication that the student has an appropriate understanding of the situational problem,
 - Mobilization of mathematical knowledge appropriate to the situational problem,
 - Development of a solution appropriate to the situational problem,
 - Appropriate validation of the steps in the solution.
- Competency 2 (Uses mathematical reasoning): 45%
 - Formulation of a conjecture appropriate to the situation,
 - Correct application of concepts and processes suited to the situation,
 - Proper implementation of mathematical reasoning suited to the situation,
 - Proper organization of the steps in a proof suited to the situation,
 - Correct justification of the steps in a proof suited to the situation.
- Competency 3 (Communicates by using mathematical language): 25%
 - Correct translation of a mathematical concept or process into another register of symbolic representation,
 - Correct interpretation of a mathematical message involving at least two registers of symbolic representation,
 - Production of a message appropriate to the communication context,
 - Production of a message in keeping with the terminology, rules and conventions of mathematics.

In addition, each student's performance will be evaluated by using the following criteria:

- Participation and behaviour in class, homework completion, formal evaluations which may include quizzes and tests.
- Formal exams will be held during exam sessions in January and June. These exams could be common to all Mathematics 306 classes in our School Board or in the Province of Québec.

4. Placement Guidelines:

- A summary mark of 60% will allow the student to continue on to grade 10 Mathematics (Second Cycle, Year Two), in one of the following three options:
 - 1) Cultural, social and technical option
 - 2) Technical and scientific option
 - 3) Science option

5. General Information:

- If a class is missed **for any reason**, it is the **student's responsibility** to obtain and complete all work missed. A missed test or quiz will be written on the day the student returns to school.
- For students to do well it is crucial that they actively participate in class, complete all homework assignments and adequately review before all formal evaluation sessions.
- Remedial help is available at lunch hour in Room 243 (between 12:50 and 1:40) upon student's request (a definitive schedule will be provided in the next few weeks). Any student in difficulty is strongly encouraged to make appointments to see the teacher.
- Parents will be contacted for repeated infringement of class rules or for incomplete assignments. It is only through cooperation of student, teacher, and parents that the best learning environment can be achieved.
- Homework will be verified and/or marked at the beginning of each class.
- Parents and students will be able to find important information about this course on my website, at the following address:

<http://www.wqsb.qc.ca/philemon/pmessier/>

CLASSROOM ETIQUETTE

1. Respect others by listening for instructions/explanations the first time they are given.
2. Respect the teacher or fellow students by not calling out.
3. Respect others by not seeking too much attention.
4. Respect others by not swearing, using inappropriate language, or making "put-downs".
5. Respect others by being patient for instructions/explanations or help from the teacher.
6. Respect the learning environment by not creating unnecessary noise.

CLASS RULES/PROCEDURES

7. Be on time: when the bell rings, you are in class ready to work.
8. Come prepared: you will NOT be allowed to return to your locker for materials or workbooks. Be sure to always bring your calculator, as you may not share these with anyone for a test or a quiz.
9. Take out your homework as soon as you enter the class. Marking will take place at the beginning of the period.
10. Unjustified absences during a test or a quiz will result in a mark of zero for that evaluation.
11. Writing on or defacing the desks: you will have to clean all the desks at lunch or at recess.
12. Test marks that are less than 60% require a parent/guardian signature.

CLASS MATERIALS

- Pencils: All homework, tests, quizzes, and exams MUST be done in pencil. Work done in pen WILL NOT be corrected (i.e. zero for that work!).
- Pens for clean and concise notes only.
- Eraser.
- Ruler.
- Geometry set (Protractor, compass, 45° triangle, 60° triangle...)
- Scientific calculator (minimum). An inexpensive graphing calculator is also an option, but is not mandatory, as all work will be possible using a regular scientific calculator.
- One 3 rings binder used only for math (not for multiple subjects) (1 1/2 – 2 inches).
- Loose-leaf sheets.
- Grid paper or a grid paper notebook.
- 1 notebook (150 – 200 pages) for notes EXCLUSIVELY.